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## PATENT COOPERATION TREATY

PCT

## NOTIFICATION RELATING TO PRIORITY CLAIM

(PCT Rules 26bis.1 and 26bis.2 and  
Administrative Instructions, Sections 402 and 409)

From the INTERNATIONAL BUREAU

To:

KRUK, Wiggert, Johan  
Koninklijke KPN N.V.  
P.O. Box 95321  
NL-2509 CH The Hague  
PAYS-BAS

Date of mailing (day/month/year) 03 February 2000 (03.02.00)	<b>IMPORTANT NOTIFICATION</b>
Applicant's or agent's file reference y02514WO	
International application No. PCT/EP99/09045	International filing date (day/month/year) 16 November 1999 (16.11.99)
Applicant KONINKLIJKE KPN N.V. et al	

The applicant is hereby notified of the following in respect of the priority claim(s) made in the international application.

1. ☒ **Correction of priority claim.** In accordance with the applicant's notice received on: 11 January 2000 (11.01.00), the following priority claim has been corrected to read as follows:  
 NL 19 November 1998 (19.11.98) 1010597  
☐ even though the indication of the number of the earlier application is missing.  
☐ even though the following indication in the priority claim is not the same as the corresponding indication appearing in the priority document:
2. ☐ **Addition of priority claim.** In accordance with the applicant's notice received on: , the following priority claim has been added:  
☐ even though the indication of the number of the earlier application is missing.  
☐ even though the following indication in the priority claim is not the same as the corresponding indication appearing in the priority document:
3. ☐ As a result of the correction and/or addition of (a) priority claim(s) under items 1 and/or 2, the (earliest) priority date is:
4. ☐ **Priority claim considered not to have been made.**  
☐ The applicant failed to respond to the Invitation under Rule 26bis.2(a) (Form PCT/IB/316) within the prescribed time limit.  
☐ The applicant's notice was received after the expiration of the prescribed time limit under Rule 26bis.1(a).  
☐ The applicant's notice failed to correct the priority claim so as to comply with the requirements of Rule 4.10.  
 The applicant may, before the technical preparations for international publication have been completed and subject to the payment of a fee, request the International Bureau to publish, together with the international application, information concerning the priority claim. See Rule 26bis.2(c) and the PCT Applicant's Guide, Volume I, Annex B2(18).
5. ☐ In case where multiple priorities have been claimed, the above item(s) relate to the following priority claim(s):
6. A copy of this notification has been sent to the receiving Office and  
☒ to the International Searching Authority (where the international search report has not yet been issued).  
☒ the designated Offices (which have already been notified of the receipt of the record copy).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 740.14.35	Authorized officer R. Raissi Telephone No. (41-22) 338.83.38
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## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents  
 United States Patent and Trademark  
 Office  
 Box PCT  
 Washington, D.C. 20231  
 ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 14 July 2000 (14.07.00)	
International application No. PCT/EP99/09045	Applicant's or agent's file reference y02514WO
International filing date (day/month/year) 16 November 1999 (16.11.99)	Priority date (day/month/year) 19 November 1998 (19.11.98)
Applicant NIBBELING, Henricus, Theodorus, Maria	

1. The designated Office is hereby notified of its election made:



in the demand filed with the International Preliminary Examining Authority on:

14 June 2000 (14.06.00)



in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO  
 34, chemin des Colombettes  
 1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Manu Berrod

Telephone No.: (41-22) 338.83.38

RECD 24 JAN 2001

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 402514WO	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP99/09045	International filing date (day/month/year) 16/11/1999	Priority date (day/month/year) 19/11/1998
International Patent Classification (IPC) or national classification and IPC H04B7/185		
Applicant KONINKLIJKE KPN N.V et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 5 sheets, including this cover sheet.

- ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets. (6)

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 14/06/2000	Date of completion of this report 18.01.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized officer Bischof, J-L Telephone No. +31 70 340 2607 

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP99/09045

## I. Basis of the report

1. This report has been drawn on the basis of *(substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments (Rules 70.16 and 70.17).):*

### Description, pages:

1-16 as originally filed

### Claims, No.:

1-27 as received on 20/11/2000 with letter of 15/11/2000

### Drawings, sheets:

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/EP99/09045

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):  
*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes:	Claims	1-27
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-27
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-27
	No:	Claims	

**2. Citations and explanations**  
**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/EP99/09045

1. The subject-matter of claims 1-27 does satisfy the criterion of novelty, inventive step and industrial applicability as set forth in Article 33 PCT.
2. The object of the present application is a method, a device and a telecommunication unit for exchanging telecommunication traffic between users in a telecommunication system comprising a satellite communication network in which the satellites are linked to earth stations connected by way of a service center to an earth communication network. Messages being short to such an extent that no complete network address can be included are collected and distributed in the satellite communication system.
3. The closest state of the art is represented by D1: US-A-5,815,506 (Gokhale) which discloses a mobile satellite communication system including a land-earth station which communicates with a mobile earth station via a satellite. A short message is transmitted from one of the land earth stations or one of the mobile earth stations via the satellite to the other land earth station or mobile earth station. The short message is transmitted in one of a plurality of out-of-band signalling channels. The transmission occurs at a time when no signalling information is being transmitted.
4. The transmission of short messages in a satellite communication system needs the setting up and breaking off multiple links which leads to an unefficient use of the network.
5. The exchange of telecommuniacion traffic between users in a telecommunication system as described in paragraph 2 here above is optimized by the method disclosed in the second part (Rule 6.3(b) PCT) of independent method claim 1.

Independent claim 13 discloses a device for such a method, independent claim 25 a telecommuniacion unit for such a method.

Messages having an address code short to such a degree that no complete network adress can be included and received in the service center from users are stored in electronic mailboxes . The messages are distributed in mailboxes on the basis of an adress code by way of a lookup table.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/EP99/09045

The use of mailboxes had the advantage that the relatively short return messages may be collected and periodically or automatically transmitted by way of the network at the request of the user as one total, larger message. This enables a more efficient use of the communication network.

6. None of the known prior art document discloses or suggests the claimed subject-matter. The dependent claims are truly dependent claims and therefore satisfy the criterion set forth in Article 33 PCT.
7. To meet the requirements of Rule 5.1(a)(ii) PCT, the document D1 should have been identified in the description and the relevant background art disclosed therein should have been briefly discussed.

In order to fulfil the requirements of Rule 5.1(a)(iii) PCT, the description should have been brought into conformity with the new claims.



CLAIMS

1. Method for exchanging telecommunication traffic between users in a telecommunications system, comprising a  
5 satellite communication network, such as the Inmarsat system, built up from several telecommunication satellites which are operatively coupled, by way of radio transmission links, to one or more earth stations, which earth stations are operatively connected, by way of a service centre, to  
10 an earth communication network built up from fixed and/or mobile telecommunication networks, characterised in that messages received in the service centre from users by way of the satellite communication network are stored in electronic mailboxes.

15

2. Method according to claim 1, characterised in that messages received from a group of users are stored in a common mailbox.

20 3. Method according to claim 2, characterised in that messages from users associated with a telecommunication operator are stored, in a common mailbox.

4. Method according to claim 3, characterised in  
25 that, in a common mailbox, messages are stored distributed over separate mailboxes.

5. Method according to one or more of the preceding claims, characterised in that a mailbox is selected on the  
30 basis of an address code included in a message received and an identification code associated with the user in question, a lookup table for an identification code being available and the address code referring to a reference included in the lookup table.

35

6. Method according to claim 5, characterised in that the lookup table comprises at least a first and a second address block, the one address block referring to a user-specific mailbox and the other address block referring  
40 to a mailbox common to a group of users, a mailbox in

arranged for selecting a message on the basis of an address code received.

18. Device according to claim 17, characterised in  
5 that the lookup table comprises a fourth address block, in which references are included which relate to services to be rendered to a user, the addressing means being arranged for selecting a service in question on the basis of an address code received.

10

19. Device according to one or more of the claims 13 to 18 inclusive, characterised in that the control means are arranged for, if so requested, transmitting to an authorised user messages stored in a mailbox.

15

20. Device according to one or more of the claims 13 to 18 inclusive, characterised in that the control means are arranged for automatically transmitting, to an authorised user, messages stored in a mailbox.

20

21. Device according to claim 19 or 20, characterised in that the control means are arranged for erasing stored messages after the transmission thereof from the mailbox.

25

22. Device according to one or more of the claims 13 to 21 inclusive, characterised in that the mailboxes and the control means are mounted in the service centre.

23. Device according to one or more of the claims 13  
30 to 22 inclusive, characterised in that the control means are arranged for storing, by way of a transmission link, messages received in remotely located mailboxes.

24. Device according to one or more of the claims 13  
35 to 23 inclusive, characterised in that the control means are arranged for tariffing services rendered to a user.

25. Telecommunication unit, comprising user interface means and transmission means for exchanging  
40 telecommunication traffic between users in a

question being selected from the first or second address block on the basis of the address code received.

7. Method according to claim 6, characterised in  
5 that the lookup table comprises a third address block in which references are included relating to a group of most recently transmitted messages.

8. Method according to claim 7, characterised in  
10 that the lookup table comprises a fourth address block in which references are included relating to services to be rendered to a user, a service in question being selected on the basis of the address code received.

15 9. Method according to claim 8, characterised in that the lookup table comprises 128 consecutively numbered references, the first address block referring to the first 32 references having the lowest sequence numbers, the  
20 the third address block referring to the still following 32 references, and the fourth address block referring to the 32 references having the highest sequence numbers.

10. Method according to one or more of the preceding  
25 claims, characterised in that the messages stored in a mailbox may be transmitted to an authorised user on demand.

11. Method according to one or more of the claims 1  
to 9 inclusive, characterised in that the messages stored  
30 in a mailbox are transmitted automatically to an authorised user, in clusters of messages, if so required.

12. Method according to one or more of the preceding  
claims, characterised by a user's account associated with  
35 an electronic mailbox, for crediting thereto the costs involved in receiving, storing and transmitting messages.

13. Device for exchanging, in a telecommunications  
system, telecommunication traffic between users, which  
40 telecommunications system comprises a satellite

communication network, such as the Inmarsat system, built up from several telecommunication satellites which are operatively coupled, by way of radio transmission links, to one or more earth stations, which earth stations are operatively connected, by way of a service centre, to an earth communication network built up from fixed and/or mobile telecommunication networks, characterised by control means for storing in electronic mailboxes, messages received in the service centre from users by way of the satellite communication network.

14. Device according to claim 13, characterised in that the control means are arranged for storing, in a common mailbox, messages received from a group of users.

15. Device according to claim 13 or 14, characterised in that the control means are arranged for selecting a mailbox on the basis of an address code included in a message received and an identification code associated with a user in question, the control means comprising an identification-code-related lookup table provided with references to mailboxes for selecting a reference or mailbox, as the case may be, on the basis of an address code and identification code received.

16. Device according to claim 15, characterised in that the lookup table comprises at least a first and a second address block, the one address block referring to a user-specific mailbox and the other address block referring to a mailbox common to a group of users, the control means being arranged for selecting, from the first or second address block on the basis of an address code received, an individual or common mailbox in question for storing a message received therein.

17. Device according to claim 16, characterised in that the lookup table comprises a third address block, in which references are included which relate to a group of most recently transmitted messages, the control means being

telecommunications system, comprising a satellite communication network, such as the Inmarsat system, built up from several telecommunication satellites which are operatively coupled, by way of radio transmission links, to one or more earth stations, which earth stations are operatively connected, by way of a service centre, to an earth communication network built up from fixed and/or mobile telecommunication networks, a message transmitted by the telecommunication means comprising an address code, characterised in that the transmission device is arranged for transmitting an address code selected from a first or second address block, comprising address codes which refer to a user-specific electronic mailbox or a common electronic mailbox for storing therein a message transmitted by the transmission device.

26. Telecommunication unit according to claim 25, characterised in that the transmission device is arranged for transmitting an address code selected from a third address block, comprising references relating to a group of most recently transmitted messages, or a fourth address block, comprising references relating to services to be rendered to a user.

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

KLEIN, Bart  
KONINKLIJKE KPN N.V.  
P.O. Box 95321  
NL-2509 CH Den Haag  
PAYS-BAS

PCT

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing  
(day/month/year) 18.01.2001

Applicant's or agent's file reference  
402514WO

IMPORTANT NOTIFICATION

International application No.  
PCT/EP99/09045

International filing date (day/month/year)  
16/11/1999

Priority date (day/month/year)  
19/11/1998

Applicant  
KONINKLIJKE KPN N.V et al

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/



European Patent Office - P.B. 5818 Patentlaan 2  
NL-2280 HV Rijswijk - Pays Bas  
Tel. +31 70 340 - 2040 Tx: 31 651 epo nl  
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Authorized officer

Smits, A

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# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>402514WO</b>		<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. <b>PCT/EP99/09045</b>	International filing date (day/month/year) <b>16/11/1999</b>	Priority date (day/month/year) <b>19/11/1998</b>	
International Patent Classification (IPC) or national classification and IPC <b>H04B7/185</b>			
Applicant <b>KONINKLIJKE KPN N.V et al</b>			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets. <b>(6)</b></p>			
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the report</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>IV <input type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input type="checkbox"/> Certain documents cited</li> <li>VII <input type="checkbox"/> Certain defects in the international application</li> <li>VIII <input checked="" type="checkbox"/> Certain observations on the international application</li> </ul>			
Date of submission of the demand <b>14/06/2000</b>		Date of completion of this report <b>18.01.2001</b>	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized officer  <b>Bischof, J-L</b>  Telephone No. +31 70 340 2607	



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/EP99/09045

**I. Basis of the report**

1. This report has been drawn on the basis of *(substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments (Rules 70.16 and 70.17).)*

**Description, pages:**

1-16 as originally filed

**Claims, No.:**

1-27 as received on 20/11/2000 with letter of 15/11/2000

**Drawings, sheets:**

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
  - ☐ the language of publication of the international application (under Rule 48.3(b)).
  - ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
  - ☐ filed together with the international application in computer readable form.
  - ☐ furnished subsequently to this Authority in written form.
  - ☐ furnished subsequently to this Authority in computer readable form.
  - ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
  - ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
4. The amendments have resulted in the cancellation of:
- ☐ the description, pages:
  - ☐ the claims, Nos.:



☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes:	Claims	1-27
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-27
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-27
	No:	Claims	

**2. Citations and explanations**  
**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**

1. The subject-matter of claims 1-27 does satisfy the criterion of novelty, inventive step and industrial applicability as set forth in Article 33 PCT.
2. The object of the present application is a method, a device and a telecommunication unit for exchanging telecommunication traffic between users in a telecommunication system comprising a satellite communication network in which the satellites are linked to earth stations connected by way of a service center to an earth communication network. Messages being short to such an extent that no complete network address can be included are collected and distributed in the satellite communication system.
3. The closest state of the art is represented by D1: US-A-5,815,506 (Gokhale) which discloses a mobile satellite communication system including a land-earth station which communicates with a mobile earth station via a satellite. A short message is transmitted from one of the land earth stations or one of the mobile earth stations via the satellite to the other land earth station or mobile earth station. The short message is transmitted in one of a plurality of out-of-band signalling channels. The transmission occurs at a time when no signalling information is being transmitted.
4. The transmission of short messages in a satellite communication system needs the setting up and breaking off multiple links which leads to an unefficient use of the network.
5. The exchange of telecommuniacion traffic between users in a telecommunication system as described in paragraph 2 here above is optimized by the method disclosed in the second part (Rule 6.3(b) PCT) of independent method claim 1.

Independent claim 13 discloses a device for such a method, independent claim 25 a telecommuniacion unit for such a method.

Messages having an address code short to such a degree that no complete network address can be included and received in the service center from users are stored in electronic mailboxes . The messages are distributed in mailboxes on the basis of an address code by way of a lookup table.

The use of mailboxes had the advantage that the relatively short return messages may be collected and periodically or automatically transmitted by way of the network at the request of the user as one total, larger message. This enables a more efficient use of the communication network.

6. None of the known prior art document discloses or suggests the claimed subject-matter. The dependent claims are truly dependent claims and therefore satisfy the criterion set forth in Article 33 PCT.
7. To meet the requirements of Rule 5.1(a)(ii) PCT, the document D1 should have been identified in the description and the relevant background art disclosed therein should have been briefly discussed.

In order to fulfil the requirements of Rule 5.1(a)(iii) PCT, the description should have been brought into conformity with the new claims.

09/807112

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JCS Rec'd PCT/PTO 06 APR 2001

## AMENDED SET OF CLAIMS

1. Method for exchanging telecommunication traffic between users in a telecommunications system (1),  
5 comprising a satellite communication network (2), such as the Inmarsat system, built up from several telecommunication satellites (4) which are operatively coupled, by way of radio transmission links (6), to one or more earth stations (5), which earth stations are  
10 operatively connected, by way of a service centre (7), to an earth communication network (3) built up from fixed and/or mobile telecommunication networks (9;10;11;12), characterised in that messages having an address code (32) short to such a degree that no complete network  
15 address can be included, and received in the service centre (7) from users (13;14;15) by way of the satellite communication network (2), are stored in electronic mailboxes (21), said messages being distributed among the  
20 mailboxes on the basis of an address code (32) or part thereof, by way of at least one lookup table (35) and the address code referring to a reference included in the lookup table.
2. Method according to claim 1, characterised in  
25 that messages received from a group of users (13;14;15) are stored in a common mailbox (24;25;26).
3. Method according to claim 2, characterised in  
30 that messages from users associated with a telecommunication operator are stored in a common mailbox (27;28).
4. Method according to claim 3, characterised in  
35 that, in a common mailbox, messages are stored distributed over separate mailboxes (21).
5. Method according to one or more of the preceding claims, characterised in that a mailbox is selected on

the basis of said address code (32) included in a message received and an identification code (31) associated with the user in question.

- 5 6. Method according to claim 5, characterised in that the lookup table (35) comprises at least a first (36) and a second (37) address block, the one address block referring to a user-specific mailbox (21) and the other address block referring to a mailbox common to a group of users (24;25;26) , a mailbox in question being selected from the first or second address block on the basis of the address code (32) received.
- 10 7. Method according to claim 6, characterised in that the lookup table (35) comprises a third address block (38) in which references are included relating to a group of most recently transmitted messages.
- 15 8. Method according to claim 7, characterised in that the lookup table (35) comprises a fourth address block (39) in which references are included relating to services to be rendered to a user, a service in question being selected on the basis of the address code received.
- 20 9. Method according to claim 8, characterised in that the lookup table (35) comprises 128 consecutively numbered references, the first address block (36) referring to the first 32 references having the lowest sequence numbers, the second address block (37) referring to the next 32 references, the third address block (38) referring to the still following 32 references, and the fourth address block (39) referring to the 32 references having the highest sequence numbers.
- 25 10. Method according to one or more of the preceding claims, characterised in that the messages stored in a mailbox may be transmitted to an authorised user on demand.
- 30
- 35

11. Method according to one or more of the claims 1 to 9 inclusive, characterised in that the messages stored in a mailbox are transmitted automatically to an authorised user, in clusters of messages, if so required.

12. Method according to one or more of the preceding claims, characterised by a user's account associated with an electronic mailbox, for crediting thereto the costs involved in receiving, storing and transmitting messages.

13. Device for exchanging, in a telecommunications system (1), telecommunication traffic between users (13;14;15), which telecommunications system comprises a satellite communication network (2), such as the Inmarsat system, built up from several telecommunication satellites (4) which are operatively coupled, by way of radio transmission links (6), to one or more earth stations (5), which earth stations are operatively connected, by way of a service centre (7), to an earth communication network (3) built up from fixed and/or mobile telecommunication networks (9;10;11;12), characterised by control means (23) for storing in electronic mailboxes (21) messages, having an address code (32) being short to such an extent that no complete network address can be included and received in the service centre (7) from users (13;14;15) by way of the satellite communication network (2), the control means (23) distributing said messages among the mailboxes (21) on the basis of an address code (32) or part thereof, by way of a lookup table (35) and the address code referring to a reference included in the lookup table.

14. Device according to claim 13, characterised in that the control means (23) are arranged for storing, in a common mailbox (24;25;26), messages received from a group of users.

15. Device according to claim 13 or 14, characterised in that the control means (23) are arranged for selecting a mailbox (21) on the basis of said address code (32) included in a message received and an identification code (31) associated with a user in question, the control means comprising an identification-code-related lookup table (35) provided with references to mailboxes for selecting said reference or mailbox, as the case may be, on the basis of said address code and identification code received.

16. Device according to claim 15, characterised in that the lookup table (35) comprises at least a first (36) and a second (37) address block, the one address block referring to a user-specific mailbox (21) and the other address block referring to a mailbox common to a group of users (24;25;26), the control means (23) being arranged for selecting, from the first or second address block on the basis of an address code (32) received, an individual or common mailbox in question for storing a message received therein.

17. Device according to claim 16, characterised in that the lookup table (35) comprises a third address block (38), in which references are included which relate to a group of most recently transmitted messages, the control means being arranged for selecting a message on the basis of an address code (32) received.

30

18. Device according to claim 17, characterised in that the lookup table (35) comprises a fourth address block (39), in which references are included which relate to services to be rendered to a user, the control means being arranged for selecting a service in question on the basis of an address code received.

35

19. Device according to one or more of the claims 13 to 18 inclusive, characterised in that the control means (23) are arranged for, if so requested, transmitting to an authorised user messages stored in a mailbox.

5

20. Device according to one or more of the claims 13 to 18 inclusive, characterised in that the control means (23) are arranged for automatically transmitting, to an authorised user, messages stored in a mailbox.

10

21. Device according to claim 19 or 20, characterised in that the control means (23) are arranged for erasing stored messages after the transmission thereof from the mailbox.

15

22. Device according to one or more of the claims 13 to 21 inclusive, characterised in that the mailboxes (21) and the control means (23) are mounted in the service centre (7).

20

23. Device according to one or more of the claims 13 to 22 inclusive, characterised in that the control means (23) are arranged for storing, by way of a transmission link, messages received in remotely located mailboxes.

25

24. Device according to one or more of the claims 13 to 23 inclusive, characterised in that the control means (23) are arranged for tariffing services rendered to a user.

30

25. Telecommunication unit, comprising user interface means and transmission means (34) for exchanging telecommunication traffic between users (13;14;15) in a telecommunications system (1), comprising a satellite communication network (2), such as the Inmarsat system, built up from several telecommunication satellites (4) which are operatively coupled, by way of radio transmission links (6), to one or more earth stations

35



(5), which earth stations are operatively connected, by way of a service centre (7), to an earth communication network (3) built up from fixed and/or mobile telecommunication networks (9;10;11;12), a message  
5 transmitted by the transmission means having an address code (32) being short to such an extent that no complete network address can be included, and the messages received in the service centre (7) from users (13;14;15) by way of the satellite communication network (2) being  
10 stored in electronic mailboxes (21), the transmission means being arranged for distributing said messages among the mailboxes on the basis of an address code or part thereof by way of a lookup table (35) and the address code referring to a reference included in the lookup  
15 table.

26. Telecommunication unit according to claim 25, characterised in that the transmission means (34) are arranged for transmitting an address code selected from a  
20 first (36) or second (37) address block, comprising address codes which refer to a user-specific electronic mailbox (21) or a common electronic mailbox (24;25;26) for storing therein a message transmitted by the transmission means.

25

27. Telecommunication unit according to claim 26, characterised in that the transmission means (34) are arranged for transmitting an address code selected from a third address block (38), comprising references relating  
30 to a group of most recently transmitted messages, or a fourth address block (39), comprising references relating to services to be rendered to a user.

# PCT

## REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only	
PCT/E 9 / 09045	
International Application No.	
16 NOV 1999	(16. 11. 1999)
International Filing Date	
EUROPEAN PATENT OFFICE PCT INTERNATIONAL APPLICATION	
Name of receiving Office and "PCT International Application"	
Applicant's or agent's file reference (if desired) (12 characters maximum)	
402514W0	

<b>Box No. I TITLE OF INVENTION</b>  <p style="text-align: center; font-weight: bold;">Telecommunications system.</p>	
<b>Box No. II APPLICANT</b>  <div style="display: flex; justify-content: space-between;"> <div style="width: 65%;"> <p style="font-size: x-small;">Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)</p> <p>KONINKLIJKE KPN N.V. Stationsplein 7 9726 AE GRONINGEN The Netherlands</p> </div> <div style="width: 30%;"> <p><input type="checkbox"/> This person is also inventor.</p> <p>Telephone No. +31 70 3323678</p> <p>Facsimile No. +31 70 3323840</p> <p>Teleprinter No.</p> </div> </div> <div style="display: flex; justify-content: space-between; font-size: x-small;"> <div>State (that is, country) of nationality: NL</div> <div>State (that is, country) of residence: NL</div> </div> <div style="font-size: x-small;"> <p>This person is applicant for the purposes of:</p> <div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> all designated States             <input checked="" type="checkbox"/> all designated States except the United States of America             <input type="checkbox"/> the United States of America only             <input type="checkbox"/> the States indicated in the Supplemental Box           </div> </div>	
<b>Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)</b>  <div style="display: flex; justify-content: space-between;"> <div style="width: 65%;"> <p style="font-size: x-small;">Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)</p> <p>NIBBELING, Henricus Theodorus Maria Kozakkenberg 21 2716 GA ZOETERMEER The Netherlands</p> </div> <div style="width: 30%;"> <p>This person is:</p> <p><input type="checkbox"/> applicant only</p> <p><input checked="" type="checkbox"/> applicant and inventor</p> <p><input type="checkbox"/> inventor only (If this check-box is marked, do not fill in below.)</p> </div> </div> <div style="display: flex; justify-content: space-between; font-size: x-small;"> <div>State (that is, country) of nationality: NL</div> <div>State (that is, country) of residence: NL</div> </div> <div style="font-size: x-small;"> <p>This person is applicant for the purposes of:</p> <div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> all designated States             <input type="checkbox"/> all designated States except the United States of America             <input checked="" type="checkbox"/> the United States of America only             <input type="checkbox"/> the States indicated in the Supplemental Box           </div> </div> <p><input type="checkbox"/> Further applicants and/or (further) inventors are indicated on a continuation sheet.</p>	
<b>Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE</b>  <p>The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:</p> <div style="display: flex; justify-content: flex-end; align-items: center;"> <input checked="" type="checkbox"/> agent         <input type="checkbox"/> common representative       </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 65%;"> <p style="font-size: x-small;">Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)</p> <p>KRUK, Wiggert Johan KONINKLIJKE KPN N.V. P.O. BOX 95321 2509 CH THE HAGUE The Netherlands</p> </div> <div style="width: 30%;"> <p>Telephone No. +31 70 3323678</p> <p>Facsimile No. +31 70 3323840</p> <p>Teleprinter No.</p> </div> </div> <p><input type="checkbox"/> Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.</p>	

## Box No.V DESIGNATION OF STATES

The following designations are hereby made under Rule 4.9(a) (mark the applicable boxes; at least one must be marked):

## Regional Patent

- ☒ AP ARIPO Patent: <sup>TZ Tanzania</sup> GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, SD Sudan, SL Sierra Leone, SZ Swaziland, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- ☒ EA Eurasian Patent: AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☒ EP European Patent: AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- ☒ OA OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line)

National Patent (if other kind of protection or treatment desired, specify on dotted line):

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> AE United Arab Emirates                  | <input checked="" type="checkbox"/> LR Liberia                                   |
| <input checked="" type="checkbox"/> AL Albania                               | <input checked="" type="checkbox"/> LS Lesotho                                   |
| <input checked="" type="checkbox"/> AM Armenia                               | <input checked="" type="checkbox"/> LT Lithuania                                 |
| <input checked="" type="checkbox"/> AT Austria                               | <input checked="" type="checkbox"/> LU Luxembourg                                |
| <input checked="" type="checkbox"/> AU Australia                             | <input checked="" type="checkbox"/> LV Latvia                                    |
| <input checked="" type="checkbox"/> AZ Azerbaijan                            | <input checked="" type="checkbox"/> MD Republic of Moldova                       |
| <input checked="" type="checkbox"/> BA Bosnia and Herzegovina                | <input checked="" type="checkbox"/> MG Madagascar                                |
| <input checked="" type="checkbox"/> BB Barbados                              | <input checked="" type="checkbox"/> MK The former Yugoslav Republic of Macedonia |
| <input checked="" type="checkbox"/> BG Bulgaria                              |  |
| <input checked="" type="checkbox"/> BR Brazil                                | <input checked="" type="checkbox"/> MN Mongolia                                  |
| <input checked="" type="checkbox"/> BY Belarus                               | <input checked="" type="checkbox"/> MW Malawi                                    |
| <input checked="" type="checkbox"/> CA Canada                                | <input checked="" type="checkbox"/> MX Mexico                                    |
| <input checked="" type="checkbox"/> CH and LI Switzerland and Liechtenstein  | <input checked="" type="checkbox"/> NO Norway                                    |
| <input checked="" type="checkbox"/> CN China                                 | <input checked="" type="checkbox"/> NZ New Zealand                               |
| <input checked="" type="checkbox"/> CU Cuba                                  | <input checked="" type="checkbox"/> PL Poland                                    |
| <input checked="" type="checkbox"/> CZ Czech Republic                        | <input checked="" type="checkbox"/> PT Portugal                                  |
| <input checked="" type="checkbox"/> DE Germany                               | <input checked="" type="checkbox"/> RO Romania                                   |
| <input checked="" type="checkbox"/> DK Denmark                               | <input checked="" type="checkbox"/> RU Russian Federation                        |
| <input checked="" type="checkbox"/> EE Estonia                               | <input checked="" type="checkbox"/> SD Sudan                                     |
| <input checked="" type="checkbox"/> ES Spain                                 | <input checked="" type="checkbox"/> SE Sweden                                    |
| <input checked="" type="checkbox"/> FI Finland                               | <input checked="" type="checkbox"/> SG Singapore                                 |
| <input checked="" type="checkbox"/> GB United Kingdom                        | <input checked="" type="checkbox"/> SI Slovenia                                  |
| <input checked="" type="checkbox"/> GD Grenada                               | <input checked="" type="checkbox"/> SK Slovakia                                  |
| <input checked="" type="checkbox"/> GE Georgia                               | <input checked="" type="checkbox"/> SL Sierra Leone                              |
| <input checked="" type="checkbox"/> GH Ghana                                 | <input checked="" type="checkbox"/> TJ Tajikistan                                |
| <input checked="" type="checkbox"/> GM Gambia                                | <input checked="" type="checkbox"/> TM Turkmenistan                              |
| <input checked="" type="checkbox"/> HR Croatia                               | <input checked="" type="checkbox"/> TR Turkey                                    |
| <input checked="" type="checkbox"/> HU Hungary                               | <input checked="" type="checkbox"/> TT Trinidad and Tobago                       |
| <input checked="" type="checkbox"/> ID Indonesia                             | <input checked="" type="checkbox"/> UA Ukraine                                   |
| <input checked="" type="checkbox"/> IL Israel                                | <input checked="" type="checkbox"/> UG Uganda                                    |
| <input checked="" type="checkbox"/> IN India                                 | <input checked="" type="checkbox"/> US United States of America                  |
| <input checked="" type="checkbox"/> IS Iceland                               |  |
| <input checked="" type="checkbox"/> JP Japan                                 | <input checked="" type="checkbox"/> UZ Uzbekistan                                |
| <input checked="" type="checkbox"/> KE Kenya                                 | <input checked="" type="checkbox"/> VN Viet Nam                                  |
| <input checked="" type="checkbox"/> KG Kyrgyzstan                            | <input checked="" type="checkbox"/> YU Yugoslavia                                |
| <input checked="" type="checkbox"/> KP Democratic People's Republic of Korea | <input checked="" type="checkbox"/> ZA South Africa                              |
|  | <input checked="" type="checkbox"/> ZW Zimbabwe                                  |
| <input checked="" type="checkbox"/> KR Republic of Korea                     |  |
| <input checked="" type="checkbox"/> KZ Kazakhstan                            |  |
| <input checked="" type="checkbox"/> LC Saint Lucia                           |  |
| <input checked="" type="checkbox"/> LK Sri Lanka                             |  |

Check-boxes reserved for designating States which have become party to the PCT after issuance of this sheet:

- ☐ .....
- ☐ .....

**Precautionary Designation Statement:** In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation of a designation consists of the filing of a notice specifying that designation and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.)

1. If, in any of the Boxes, the space is insufficient to furnish all the information: in such case, write "Continuation of Box No. ..." (indicate the number of the Box) and furnish the information in the same manner as required according to the captions of the Box in which the space was insufficient, in particular:
- (i) if more than two persons are involved as applicants and/or inventors and no "continuation sheet" is available: in such case, write "Continuation of Box No. III" and indicate for each additional person the same type of information as required in Box No. III. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below;
  - (ii) if, in Box No. II or in any of the sub-boxes of Box No. III, the indication "the States indicated in the Supplemental Box" is checked: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the applicant(s) involved and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is applicant;
  - (iii) if, in Box No. II or in any of the sub-boxes of Box No. III, the inventor or the inventor/applicant is not inventor for the purposes of all designated States or for the purposes of the United States of America: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the inventor(s) and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is inventor;
  - (iv) if, in addition to the agent(s) indicated in Box No. IV, there are further agents: in such case, write "Continuation of Box No. IV" and indicate for each further agent the same type of information as required in Box No. IV;
  - (v) if, in Box No. V, the name of any State (or OAPI) is accompanied by the indication "patent of addition," or "certificate of addition," or if, in Box No. V, the name of the United States of America is accompanied by an indication "continuation" or "continuation-in-part": in such case, write "Continuation of Box No. V" and the name of each State involved (or OAPI), and after the name of each such State (or OAPI), the number of the parent title or parent application and the date of grant of the parent title or filing of the parent application;
  - (vi) if, in Box No. VI, there are more than three earlier applications whose priority is claimed: in such case, write "Continuation of Box No. VI" and indicate for each additional earlier application the same type of information as required in Box No. VI;
  - (vii) if, in Box No. VI, the earlier application is an ARIPO application: in such case, write "Continuation of Box No. VI", specify the number of the item corresponding to that earlier application and indicate at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed.
2. If, with regard to the precautionary designation statement contained in Box No. V, the applicant wishes to exclude any State(s) from the scope of that statement: in such case, write "Designation(s) excluded from precautionary designation statement" and indicate the name or two-letter code of each State so excluded.
3. If the applicant claims, in respect of any designated Office, the benefits of provisions of the national law concerning non-prejudicial disclosures or exceptions to lack of novelty: in such case, write "Statement concerning non-prejudicial disclosures or exceptions to lack of novelty" and furnish that statement below.

Continuation of Box IX

NIBBELING

Henricus Theodorus Maria



<b>Box No. VI PRIORITY CLAIM</b>		<input type="checkbox"/> Further priority claims are indicated in the Supplemental Box.		
Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country	regional application: regional Office	international application: receiving Office
item (1) (17.11.98) 17 NOV 1998	1010597	NL		
item (2)				
item (3)				

☐ The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s):

\* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.

#### Box No. VII INTERNATIONAL SEARCHING AUTHORITY

**Choice of International Searching Authority (ISA)**  
(if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):

ISA/ EP

**Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):**

Date (day/month/year)

Number

Country (or regional Office)

#### Box No. VIII CHECK LIST; LANGUAGE OF FILING

This international application contains the following number of sheets:

request : 4  
description (excluding sequence listing part) : 16  
claims : 5  
abstract : 1  
drawings : 3  
sequence listing part of description :  
Total number of sheets : 29

This international application is accompanied by the item(s) marked below:

1. ☒ fee calculation sheet
2. ☒ separate signed power of attorney
3. ☒ copy of general power of attorney; reference number, if any:
4. ☐ statement explaining lack of signature
5. ☒ priority document(s) identified in Box No. VI as item(s):
6. ☒ translation of international application into (language): EN
7. ☐ separate indications concerning deposited microorganism or other biological material
8. ☐ nucleotide and/or amino acid sequence listing in computer readable form
9. ☒ other (specify): search report

Figure of the drawings which should accompany the abstract: 1

Language of filing of the international application:

English

#### Box No. IX SIGNATURE OF APPLICANT OR AGENT

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).



Wiggert Johan KRUK

1. Date of actual receipt of the purported international application: 16 NOV 1999 (16.11.1999)		2. Drawings: <input checked="" type="checkbox"/> received: <input type="checkbox"/> not received:
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:		
4. Date of timely receipt of the required corrections under PCT Article 11(2):		
5. International Searching Authority (if two or more are competent): ISA/	6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid.	

Date of receipt of the record copy by the International Bureau:

For International Bureau use only

The demand must be filed directly with the competent International Preliminary Examining Authority or, if two or more Authorities are competent, with the one chosen by the applicant. The full name or two-letter code of that Authority may be indicated by the applicant on the line below:

IPEA/ EP

**PCT**

**CHAPTER II**

**DEMAND**

under Article 31 of the Patent Cooperation Treaty:  
The undersigned requests that the international application specified below be the subject of international preliminary examination according to the Patent Cooperation Treaty and hereby elects all eligible States (except where otherwise indicated).

For International Preliminary Examining Authority use only	
Identification of IPEA	Date of receipt of DEMAND
<b>Box No. I IDENTIFICATION OF THE INTERNATIONAL APPLICATION</b>	
International application No.	Applicant's or agent's file reference
PCT/EP 99/09045	402514 WO
International filing date (day/month/year)	(Earliest) Priority date (day/month/year)
16 NOV 1999 (16/11/99)	19 NOV 1998 (19/11/98)
Title of invention	
Telecommunications system	
<b>Box No. II APPLICANT(S)</b>	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)	Telephone No.:
Koninklijke KPN N.V. 7 Stationsplein 9726 AE GRONINGEN The Netherlands	+31 70 3323678
	Facsimile No.:
	+31 70 3323840
	Teleprinter No.:
State (that is, country) of nationality:	State (that is, country) of residence:
NL	NL
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)	
NIBBELING, Henricus Theodorus Maria Kozakkenberg 21 2716 GA ZOETERMEER The Netherlands	
State (that is, country) of nationality:	State (that is, country) of residence:
NL	NL
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)	
State (that is, country) of nationality:	State (that is, country) of residence:
<input type="checkbox"/> Further applicants are indicated on a continuation sheet.	

**Box No. III AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE**The following person is ☒ agent ☐ common representativeand ☐ has been appointed earlier and represents the applicant(s) also for international preliminary examination.☐ is hereby appointed and any earlier appointment of (an) agent(s)/common representative is hereby revoked.☒ is hereby appointed, specifically for the procedure before the International Preliminary Examining Authority, in addition to the agent(s)/common representative appointed earlier.Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*KLEIN, Bart  
Koninklijke KPN N.V.  
P.O. Box 95321  
2509 CH THE HAGUE  
The Netherlands

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Teleprinter No.:

☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.**Box No. IV BASIS FOR INTERNATIONAL PRELIMINARY EXAMINATION****Statement concerning amendments:\***

1. The applicant wishes the international preliminary examination to start on the basis of:

☒ the international application as originally filedthe description ☐ as originally filed  
☐ as amended under Article 34the claims ☒ as originally filed  
☐ as amended under Article 19 (together with any accompanying statement)  
☐ as amended under Article 34the drawings ☒ as originally filed  
☐ as amended under Article 342. ☐ The applicant wishes any amendment to the claims under Article 19 to be considered as reversed.3. ☐ The applicant wishes the start of the international preliminary examination to be postponed until the expiration of 20 months from the priority date unless the International Preliminary Examining Authority receives a copy of any amendments made under Article 19 or a notice from the applicant that he does not wish to make such amendments (Rule 69.1(d)). *(This check-box may be marked only where the time limit under Article 19 has not yet expired.)*

\* Where no check-box is marked, international preliminary examination will start on the basis of the international application as originally filed or, where a copy of amendments to the claims under Article 19 and/or amendments of the international application under Article 34 are received by the International Preliminary Examining Authority before it has begun to draw up a written opinion or the international preliminary examination report, as so amended.

Language for the purposes of international preliminary examination: English☒ which is the language in which the international application was filed.☐ which is the language of a translation furnished for the purposes of international search.☐ which is the language of publication of the international application.☐ which is the language of the translation (to be) furnished for the purposes of international preliminary examination.**Box No. V ELECTION OF STATES**The applicant hereby elects all eligible States *(that is, all States which have been designated and which are bound by Chapter II of the PCT)*

excluding the following States which the applicant wishes not to elect:

**Box No. VI CHECK LIST**

The demand is accompanied by the following elements, in the language referred to in Box No. IV, for the purposes of international preliminary examination:

- |  |   |        |
|--|---|--------|
| 1. translation of international application                              | : | sheets |
| 2. amendments under Article 34   | : | sheets |
| 3. copy (or, where required, translation) of amendments under Article 19 | : | sheets |
| 4. copy (or, where required, translation) of statement under Article 19  | : | sheets |
| 5. letter  | : | sheets |
| 6. other (specify)   | : | sheets |

For International Preliminary Examining Authority use only

received	not received
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

The demand is also accompanied by the item(s) marked below:

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> fee calculation sheet  | 4. <input type="checkbox"/> statement explaining lack of signature                                  |
| 2. <input type="checkbox"/> separate signed power of attorney                                       | 5. <input type="checkbox"/> nucleotide and or amino acid sequence listing in computer readable form |
| 3. <input checked="" type="checkbox"/> copy of general power of attorney; reference number, if any: | 6. <input type="checkbox"/> other (specify):  |

**Box No. VII SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE**

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the demand).



Bart KLEIN  
The professional representative

For International Preliminary Examining Authority use only

1. Date of actual receipt of DEMAND:

2. Adjusted date of receipt of demand due to CORRECTIONS under Rule 60.1(b):

- |  |   |
|--|---|
| 3. <input type="checkbox"/> The date of receipt of the demand is AFTER the expiration of 19 months from the priority date and item 4 or 5, below, does not apply.                        | <input type="checkbox"/> The applicant has been informed accordingly. |
| 4. <input type="checkbox"/> The date of receipt of the demand is WITHIN the period of 19 months from the priority date as extended by virtue of Rule 80.5.                               |   |
| 5. <input type="checkbox"/> Although the date of receipt of the demand is after the expiration of 19 months from the priority date, the delay in arrival is EXCUSED pursuant to Rule 82. |   |

For International Bureau use only

Demand received from IPEA on:



## FEE CALCULATION SHEET

Annex to the Demand for international preliminary examination

International  
application No.

PCT/EP 99/09045

Applicant's or agent's  
file reference

402514WO

For International Preliminary Examining Authority use only —

Date stamp of the IPEA

Applicant

Koninklijke KPN N.V.

## Calculation of prescribed fees

1. Preliminary examination fee

EUR 1533

P

2. Handling fee (Applicants from certain States are  
entitled to a reduction of 75% of the handling fee.  
Where the applicant is (or all applicants are) so en-  
titled, the amount to be entered at H is 25% of the  
handling fee.)

EUR 147

H

3. Total of prescribed fees

Add the amounts entered at P and H  
and enter total in the TOTAL box

EUR 1680

TOTAL

## Mode of Payment

☒ authorization to charge deposit  
account with the IPEA (see below)☐ cash☐ cheque☐ revenue stamps☐ postal money order☐ coupons☐ bank draft☐ other (specify):

Deposit Account Authorization (this mode of payment may not be available at all IPEAs)

The IPEA/ EP ☒ is hereby authorized to charge the total fees indicated above to my deposit account.☒ (this check-box may be marked only if the conditions for deposit accounts of the IPEA so permit) is hereby  
authorized to charge any deficiency or credit any overpayment in the total fees indicated above to  
my deposit account.

28090011

Deposit Account Number

13 June 2000

Date (day/month/year)

Signature Bart KLEIN

21396 (rev.)

2 Ich (Mir) / I (Me) / Je (Nous)

Koninklijke KPN N.V.  
Stationsplein 7  
9726 AE GRONINGEN  
The Netherlands

3 bevollmächtigte(n) hiermit / do hereby authorize / autorise (autorisons) par la présente

**KLEIN, Bart (Professional Representative)**

mailing address: Koninklijke KPN N.V.  
Intellectual Property Group  
P.O. Box 95321  
2509 CH THE HAGUE  
The Netherlands

4 mich (uns) in den durch das Europäische Patentübereinkommen geschaffenen Verfahren in allen meinen (unseren) Patentangelegenheiten zu vertreten  
to represent me (us) in all proceedings established by the European Patent Convention and to act for me (us) in all patent transactions and to receive payments on my (our) behalf.

à me (nous) représenter pour ce qui concerne toutes mes (nos) affaires de brevet dans toute procédure instituée par la Convention sur le brevet européen et, à ce titre, à agir en mon (notre) nom et à recevoir des paiements pour mon (notre) compte.

☒ Die Vollmacht gilt auch für Verfahren nach dem Vertrag über die internationale Zusammenarbeit auf dem Gebiet des Patentrechts.  
This authorization shall also apply to the same extent to any proceedings established by the Patent Cooperation Treaty.  
Ce pouvoir s'applique également à toute procédure instituée par le Traité de coopération en matière de brevets.

☐ Weitere Vertreter sind auf einem gesonderten Blatt angegeben. / Additional representatives indicated on supplementary sheet.  
Les autres mandataires sont mentionnés sur une feuille supplémentaire.

5 ☒ Untervollmacht kann erteilt werden. / Sub-authorisation may be given. / Le pouvoir pourra être délégué.

6 ☒ Bitte die gelbe Kopie, ergänzt um die Nr. der allgemeinen Vollmacht, an den Vollmachtgeber zurücksenden.

Please return the yellow copy, supplemented by the General Authorisation No., to the authorizer.  
Prière de renvoyer la copie jaune au mandant, munie du n° du pouvoir général.

Ort / Place / Lieu **The Hague**

Datum / Date **September 01, 1998**

Unterschrift(en) / Signature(s)

  
**KLEIN, Bart (Professional Representative)**

7 Das Formular muß von (von den) Vollmachtgeber(n) (bei juristischen Personen vom Unterschriftsberechtigten) eigenhändig unterschrieben sein. Nach der Unterschrift bitte d (die) Namen des (der) Unterzeichneten mit Schreibmaschine wiederholen (bei juristischen Personen die Stellung des Unterschriftsberechtigten innerhalb der Gesellschaft angeben).

The form must bear the personal signature(s) of the authorizer(s) (in the case of legal persons, that of the officer empowered to sign). After the signature, please type the name of the signatory(ies) adding, in the case of legal persons, his (their) position within the company.

Le formulaire doit être signé de la propre main du (des) mandant(s) (dans le cas de personnes morales, de la personne ayant qualité pour signer). Veuillez ajouter à la machi après la signature, le (les) nom(s) du (des) signataire(s) en mentionnant, dans le cas de personnes morales, ses (leurs) fonctions au sein de la société.

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

# PCT

To:

KLEIN, Bart  
KONINKLIJKE KPN N.V.  
P.O. Box 95321  
NL-2509 CH Den Haag KPN GIE  
PAYS-BAS

## NOTIFICATION OF RECEIPT OF DEMAND BY COMPETENT INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

(PCT Rules 59.3(e) and 61.1(b), first sentence  
and Administrative Instructions, Section 601(a))

Date of mailing  
(day/month/year)

03. 07. 2000

Applicant's or agent's file reference  
402514WO

### IMPORTANT NOTIFICATION

International application No.

PCT/EP 99/09045

International filing date (day/month/year)

16/11/1999

Priority date (day/month/year)

19/11/1998

Applicant

KONINKLIJKE KPN N.V et al

1. The applicant is hereby notified that this International Preliminary Examining Authority considers the following date as the date of receipt of the demand for international preliminary examination of the international application:

14/06/2000

2. This date of receipt is:

- ☒ the actual date of receipt of the demand by this Authority (Rule 61.1(b)).  
☐ the actual date of receipt of the demand on behalf of this Authority (Rule 59.3(e)).  
☐ the date on which this Authority has, in response to the invitation to correct defects in the demand (Form PCT/IPEA/404), received the required corrections.

3. ☐ **ATTENTION:** That date of receipt is **AFTER** the expiration of 19 months from the priority date. Consequently, the election(s) made in the demand does (do) not have the effect of postponing the entry into the national phase until 30 months from the priority date (or later in some Offices) (Article 39(1)). Therefore, the acts for entry into the national phase must be performed within 20 months from the priority date (or later in some Offices) (Article 22). For details, see the *PCT Applicant's Guide*, Volume II.

- ☐ (If applicable) This notification confirms the information given by telephone, facsimile transmission or in person on:

4. Only where paragraph 3 applies, a copy of this notification has been sent to the International Bureau.

Name and mailing address of the IPEA/

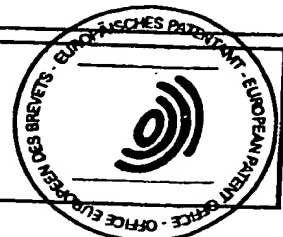


European Patent Office, P.B. 5818 Patentlaan 2  
NL-2280 HV Rijswijk - Netherlands  
Tel.: (+31-70) 340-2040, Tx. 31 651 epo nl  
Fax: (+31-70) 340-3016

Authorized officer

REISINGER E C

Tel. (+31-70) 340-2974



## PATENT COOPERATION TREATY

**UPDATED VERSION**  
PCT

**NOTIFICATION CONCERNING  
SUBMISSION OR TRANSMITTAL  
OF PRIORITY DOCUMENT**

(PCT Administrative Instructions, Section 411)

From the INTERNATIONAL BUREAU

To:

KRUK, Wiggert, Johan  
Koninklijke KPN N.V.  
P.O. Box 95321  
NL-2509 CH The Hague  
PAYS-BAS

Date of mailing (day/month/year) 03 February 2000 (03.02.00)	<b>IMPORTANT NOTIFICATION</b>
Applicant's or agent's file reference y02514WO	
International application No. PCT/EP99/09045	
International publication date (day/month/year) Not yet published	
Applicant KONINKLIJKE KPN N.V. et al	International filing date (day/month/year) 16 November 1999 (16.11.99)  Priority date (day/month/year) 19 November 1998 (19.11.98)

- The applicant is hereby notified of the date of receipt (except where the letters "NR" appear in the right-hand column) by the International Bureau of the priority document(s) relating to the earlier application(s) indicated below. Unless otherwise indicated by an asterisk appearing next to a date of receipt, or by the letters "NR", in the right-hand column, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
- This updates and replaces any previously issued notification concerning submission or transmittal of priority documents.
- An asterisk(\*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b). In such a case, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
- The letters "NR" appearing in the right-hand column denote a priority document which was not received by the International Bureau or which the applicant did not request the receiving Office to prepare and transmit to the International Bureau, as provided by Rule 17.1(a) or (b), respectively. In such a case, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

<u>Priority date</u>	<u>Priority application No.</u>	<u>Country or regional Office or PCT receiving Office</u>	<u>Date of receipt of priority document</u>
19 Nove 1998 (19.11.98)	1010597	NL	03 Janu 2000 (03.01.00)

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer

R. Raissi

Telephone No. (41-22) 338.83.38

## PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

## NOTIFICATION RELATING TO PRIORITY CLAIM

(PCT Rules 26bis.1 and 26bis.2 and  
Administrative Instructions, Sections 402 and 409)

To:

KRUK, Wiggert, Johan  
Koninklijke KPN N.V.  
P.O. Box 95321  
NL-2509 CH The Hague  
PAYS-BAS

Date of mailing (day/month/year)

03 February 2000 (03.02.00)

Applicant's or agent's file reference

y02514WO

International application No.

PCT/EP99/09045

International filing date (day/month/year)

16 November 1999 (16.11.99)

Applicant

KONINKLIJKE KPN N.V. et al

## IMPORTANT NOTIFICATION

The applicant is hereby notified of the following in respect of the priority claim(s) made in the international application.

1. ☒ **Correction of priority claim.** In accordance with the applicant's notice received on: 11 January 2000 (11.01.00), the following priority claim has been corrected to read as follows:  
 NL 19 November 1998 (19.11.98) 1010597  
☐ even though the indication of the number of the earlier application is missing.  
☐ even though the following indication in the priority claim is not the same as the corresponding indication appearing in the priority document:
2. ☐ **Addition of priority claim.** In accordance with the applicant's notice received on: , the following priority claim has been added:  
☐ even though the indication of the number of the earlier application is missing.  
☐ even though the following indication in the priority claim is not the same as the corresponding indication appearing in the priority document:
3. ☐ As a result of the correction and/or addition of (a) priority claim(s) under items 1 and/or 2, the (earliest) priority date is:
4. ☐ **Priority claim considered not to have been made.**  
☐ The applicant failed to respond to the Invitation under Rule 26bis.2(a) (Form PCT/IB/316) within the prescribed time limit.  
☐ The applicant's notice was received after the expiration of the prescribed time limit under Rule 26bis.1(a).  
☐ The applicant's notice failed to correct the priority claim so as to comply with the requirements of Rule 4.10.  
 The applicant may, before the technical preparations for international publication have been completed and subject to the payment of a fee, request the International Bureau to publish, together with the international application, information concerning the priority claim. See Rule 26bis.2(c) and the PCT Applicant's Guide, Volume I, Annex B2(1B).
5. ☐ In case where multiple priorities have been claimed, the above item(s) relate to the following priority claim(s):
6. A copy of this notification has been sent to the receiving Office and  
☒ to the International Searching Authority (where the international search report has not yet been issued).  
☒ the designated Offices (which have already been notified of the receipt of the record copy).

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer

R. Raissi

Telephone No. (41-22) 338.83.38

# PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

# PCT

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT  
OR THE DECLARATION

(PCT Rule 44.1)

To:  
KONINKLIJKE KPN N.V.  
Attn. Kruk, Wiggert J.  
P.O. Box 95321  
NL-2509 CH Den Haag  
NETHERLANDS

Date of mailing (day/month/year)	15/02/2000
-------------------------------------	------------

Applicant's or agent's file reference 402514W0	FOR FURTHER ACTION      See paragraphs 1 and 4 below
---	--

International application No. PCT/EP 99/09045	International filing date (day/month/year) 16/11/1999
--	---

Applicant  KONINKLIJKE KPN N.V et al
--

1. ☒ The applicant is hereby notified that the International Search Report has been established and is transmitted herewith.

**Filing of amendments and statement under Article 19:**

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

**When?** The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

**Where?** Directly to the International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland  
Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no International Search Report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Further action(s):** The applicant is reminded of the following:

Shortly after 18 months from the priority date, the International application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the International application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for International publication.

Within 19 months from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within 20 months from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the International Searching Authority



European Patent Office, P.B. 5818 Patentlaan 2  
NL-2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax (+31-70) 340-3016

Authorized officer

Grace Casuga

## NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

### INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only.

#### What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

#### When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

#### Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

#### How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

#### What documents must/may accompany the amendments?

##### Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

## NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:  
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:  
"Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:  
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or  
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:  
"Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

### "Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)".

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

### Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

### Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.



## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>402514W0</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 6 below.	
International application No. <b>PCT/EP 99/ 09045</b>	International filing date (day/month/year) <b>16/11/1999</b>	(Earliest) Priority Date (day/month/year) <b>17/11/1998</b>
Applicant <b>KONINKLIJKE KPN N.V et al</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (see Box II).

## 4. With regard to the title,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

**SATELLITE TELECOMMUNICATION SYSTEM WITH STORAGE OF MESSAGES IN ELECTRONIC MAILBOXES**

## 5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

## 6. The figure of the drawings to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☒ because this figure better characterizes the invention.

1

☐ None of the figures.

## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/EP 99/09045

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H04B7/185

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97 21281 A (AMSC) 12 June 1997 (1997-06-12) claims 1-23	1-26
X	EP 0 849 925 A (ICO) 24 June 1998 (1998-06-24) claims 1-7	1-26
X	US 5 815 506 A (COMSAT) 29 September 1998 (1998-09-29) column 2, line 58 -column 3, line 11; claims 1-20	1-26
X	US 5 394 560 A (KANE) 28 February 1995 (1995-02-28) column 1, line 50 -column 2, line 10 -/-	1-26

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

1 February 2000

Date of mailing of the international search report

15/02/2000

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Authorized officer

Bischof, J-L

# INTERNATIONAL SEARCH REPORT

International Application No.

PCT/EP 99/09045

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>CHENG B ET AL: "A NEW TYPE OPTIMIZED LEO SATELLITE GLOBAL EMAIL COMMUNICATION NETWORK"</p> <p>IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, PHOENIX, ARIZONA, NOV. 3 - 8, 1997, vol. 2, 3 November 1997 (1997-11-03), pages 1133-1137, XP000737707</p> <p>INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS ISBN: 0-7803-4199-6</p> <p>page 1133, left-hand column, line 1</p> <p>-right-hand column, line 2</p>	1-26

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 99/09045

Patent document cited in search report		Publication date	Patent fam. member(s)		Publication date
W0 9721281	A	12-06-1997	CA	2239985 A	12-06-1997
EP 849925	A	24-06-1998	NONE		
US 5815506	A	29-09-1998	CA	2208658 A	24-12-1997
			GB	2314738 A	07-01-1998
US 5394560	A	28-02-1995	NONE		

**SAMENWERKINGSVERDRAG (PCT)**  
**RAPPORT BETREFFENDE**  
**NIEUW ONDERZOEK VAN INTERNATIONAAL TYPE**

IDENTIFIKATIE VAN DE NATIONALE AANVRAGE		Kenmerk van de aanvrager of van de gemachtigde <b>402514NE</b>	
Nederlandse aanvraag nr. <b>1010597</b>		Indieningsdatum <b>19 november 1999</b>	
		Ingeroepen voorrangsdatum	
Aanvrager (Naam) <b>Koninklijke KPN N.V.</b>			
Datum van het verzoek voor een onderzoek van internationaal type		Door de Instantie voor Internationaal Onderzoek (ISA) aan het verzoek voor een onderzoek van internationaal type toegekend nr. <b>SN 32087 NL</b>	
<b>I. CLASSIFICATIE VAN HET ONDERWERP</b> (bij toepassing van verschillende classificaties, alle classificatiesymbolen opgeven)			
Volgens de Internationale classificatie (IPC)  <b>Int.Cl.6: H 04 B 7/185</b>			
<b>II. ONDERZOCHE GEBIEDEN VAN DE TECHNIEK</b>			
Onderzochte minimum documentatie			
Classificatiesysteem	Classificatiesymbolen		
Int.Cl.6:	H 04 B		
Onderzochte andere documentatie dan de minimum documentatie voor zover dergelijke documenten in de onderzochte gebieden zijn opgenomen			
III. <input type="checkbox"/> GEEN ONDERZOEK MOGELIJK VOOR BEPAALDE CONCLUSIES (opmerkingen op aanvullingsblad)			
IV. <input type="checkbox"/> GEBREK AAN EENHEID VAN UITVINDING (opmerkingen op aanvullingsblad)			

**VERSLAG VAN HET NIEUWHEIDSONDERZOEK VAN  
INTERNATIONAAL TYPE**

Nummer van het verzoek om een nieuwheidsonderzoek

**NL 1010597**

**A. CLASSIFICATIE VAN HET ONDERZOEK**  
**IPC 6 H04B7/185**

Volgens de Internationale Classificatie van octrooien (IPC) of zowel volgens de nationale classificatie als volgens de IPC.

**B. ONDERZOCHE GEBIEDEN VAN DE TECHNIEK**

Onderzochte minimum documentatie (classificatie gevolgd door classificatiesymbolen)

**IPC 6 H04B**

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Tijdens het internationaal nieuwheidsonderzoek geraadpleegde elektronische gegevensbestanden (naam van de gegevensbestanden en, waar uitvoerbaar, gebruikte trefwoorden)

**C. VAN BELANG GEACHTE DOCUMENTEN**

Categorie *	Geciteerde documenten, eventueel met aanduiding van speciaal van belang zijnde passages	Van belang voor conclusie nr.
X	WO 97 21281 A (AMSC) 12 Juni 1997 (1997-06-12) conclusies 1-23 ---	1-26
X	EP 0 849 925 A (ICO) 24 Juni 1998 (1998-06-24) conclusies 1-7 ---	1-26
X	US 5 815 506 A (COMSAT) 29 September 1998 (1998-09-29) kolom 2, regel 58 -kolom 3, regel 11; conclusies 1-20 ---	1-26
X	US 5 394 560 A (KANE) 28 Februari 1995 (1995-02-28) kolom 1, regel 50 -kolom 2, regel 10 --- -/--	1-26



Verdere documenten worden vermeld in het vervolg van vak C.



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De bevoegde ambtenaar

**Bischof, J-L**

VERSLAG VAN HET NIEUWHEIDSONDERZOEK VAN  
INTERNATIONAAL TYPE

Nummer van het verzoek om een nieuwheidsonderzoek

NL 1010597

C.(Vervolg). VAN BELANG GEACHTEDOCUMENTEN

Categorie *	Geciteerde documenten, met aanduiding van speciaal van belang zijnde passages	Van belang voor conclusie nr.
X <sup>1</sup>	<p>CHENG B ET AL: "A NEW TYPE OPTIMIZED LEO SATELLITE GLOBAL EMAIL COMMUNICATION NETWORK"</p> <p>IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, PHOENIX, ARIZONA, NOV. 3 - 8, 1997, deel 2, 3 November 1997 (1997-11-03), bladzijden 1133-1137, XP000737707</p> <p>INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS ISBN: 0-7803-4199-6</p> <p>bladzijde 1133, linker kolom, regel 1</p> <p>-rechter kolom, regel 2</p> <p>-----</p>	1-26

# VERSLAG VAN HET NIEUWHEIDSONDERZOEK VAN

## INTERNATIONAAL TYPE

Informatie over leden van dezelfde octrooifamilie

Nummer van het verzoek om een nieuwheidsonderzoek

NL 1010597

In het rapport genoemd octrooigeschrift		Datum van publicatie	Overeenkomen- geschrift(en)	Datum van publicatie
WO 9721281	A	12-06-1997	CA 2239985 A	12-06-1997
EP 849925	A	24-06-1998	GEEN	
US 5815506	A	29-09-1998	CA 2208658 A GB 2314738 A	24-12-1997 07-01-1998
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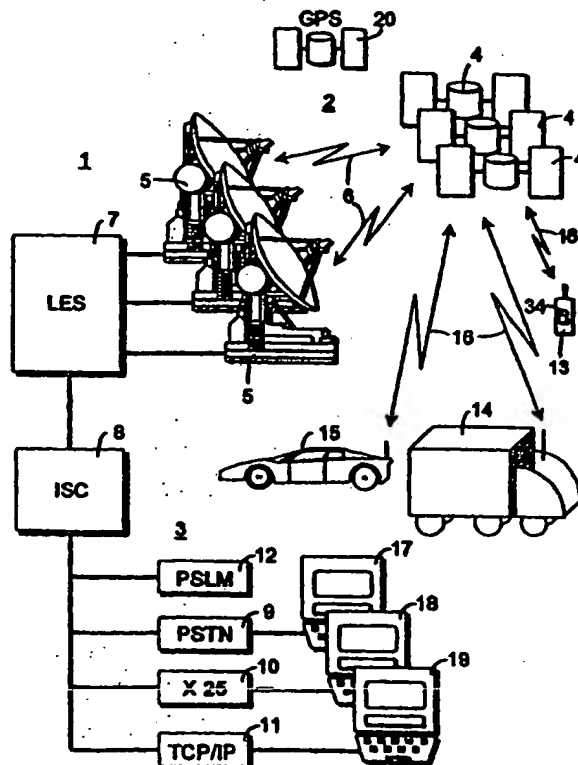
## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 : <b>H04B 7/185</b>	<b>A1</b>	(11) International Publication Number: <b>WO 00/31897</b> (43) International Publication Date: <b>2 June 2000 (02.06.00)</b>
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(54) Title: **SATELLITE TELECOMMUNICATION SYSTEM WITH STORAGE OF MESSAGES IN ELECTRONIC MAILBOXES**

## (57) Abstract

Telecommunications system, particularly for exchanging telecommunication traffic between fixed and mobile users, such as lorry drivers, by way of a satellite communication network, such as the Inmarsat system, built up from several telecommunication satellites which are operatively coupled, by way of radio transmission links, to one or more earth stations. The earth stations are operatively connected, by way of a service centre, to an earth communication network built up from fixed and/or mobile telecommunication networks, messages received from users by way of the satellite communication network being stored in electronic mailboxes at the service centre.



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## SATELLITE TELECOMMUNICATION SYSTEM WITH STORAGE OF MESSAGES IN ELECTRONIC MAILBOXES

The invention relates to the exchange of telecommunication traffic between users in a telecommunications system, comprising a satellite communication network, such as the Inmarsat system, set up from a number of telecommunication satellites which are operatively coupled, by way of radio transmission links, to one or more earth stations, which earth stations are operatively connected, by way of a service centre, to an earth communication network constructed from fixed and/or mobile telecommunication networks.

The Inmarsat-satellite communication system originally is a communication network for exchanging telecommunication traffic between users on board sea-going vessels or other vessels and shore. For navigational purposes, the so-called "Global Positioning System (GPS)" has been developed, comprising accurately positioned satellites transmitting radio signals, on the basis of which so-called GPS receivers are capable of accurately determining their position on earth.

With the progression of the mobile radio transmission technique, particularly the miniaturisation of the transmission devices, the use of satellite communication has also come within reach of other users than sea-going vessels such as, e.g., on board lorries. By way of fixed and/or mobile telecommunication networks known per se, designated by abbreviations such as PSTN (Public Switched Telephone Network), ISDN (Integrated Services Digital Network) and GSM (Global System for Mobile communication), data traffic may be exchanged, through the intervention of earth stations, over a satellite communication network, such as the Inmarsat system, with users almost anywhere in the entire world.

A manager of a fleet of lorries may use this, e.g., to pass on loading and unloading information to a lorry driver or, conversely, receive information from the lorry, e.g., relating to the state of the load. If a lorry is provided with a GPS receiver, it may also be verified in a simple

manner where the lorry in question is located at a certain point in time, or which route is being passed.

The so-called Inmarsat-D telecommunications system enables the exchange of messages between fixed and mobile users, it being possible, by way of the satellite communication network, to transmit a message to a (mobile) user having the option of a brief return message. Return messages comprise, e.g., a fixedly programmed receipt confirmation or a message initiated by an associated application.

Generally, the return message comprises an identification code of the (mobile) user, an address code relating to the destination of the message such as, e.g., a manager of a fleet of lorries, and information data. The information data may comprise, e.g., a simple confirmation of the receipt of a message, positional data, loading data etc.

In a practical implementation, the return messages may have, e.g., a size of 8 bytes (64 bits) and are transmitted at a bit rate of approx. 20 bits/s. The transmission of such a return message, therefore, takes but a few seconds. In the satellite communication network, for the transmission of such short messages a time-slot-oriented transmission protocol is applied which in the prior art is also known under the name of "Slotted Aloha".

For efficiently transmitting such short messages on the ground, special data communication facilities are required such as, e.g., a packet-switched data network operating according to the known X.25 protocol.

Upon transmission by way of an earth communication network such as, e.g., the PSTN or GSM, which are switched telecommunication networks having a customary bit transmission rate of 64 kbits/s, the time involved in setting up and breaking off a link is a multiple of the duration of the return message in question. From the viewpoint of efficient use of the network, this is an unfavourable ratio.

The invention is therefore based on the task of optimising the exchange of telecommunication traffic in a telecommunications system as referred to in the preamble in such a manner that short return messages received from

users by way of the satellite communication network may be transmitted in a technically and economically efficient manner, not only by way of a special data communication network but also by way of, inter alia, fixed and/or mobile  
5 switched telecommunication networks

The invention solves this in such a manner that messages received in the service centre from users by way of the satellite communication network are stored in electronic mailboxes.

10 The use of electronic mailboxes has the advantage that the relatively short return message may be collected therein and, e.g., periodically or automatically transmitted by way of any network at the request of a user as one total, larger message. It will be understood that  
15 this enables a more efficient use of the earth communication network, i.e., both in the event of switched connections and in the event of data connections, in which a link is set up on the basis of a so-called handshaking protocol.

20 Using electronic mailboxes according to the invention deviates from, e.g., the electronic mailboxes known from the Internet technology (e-mail), in which the starting point is not the efficient use of communication facilities, but rather the supposition that individual users are  
25 capable of communicating without messages getting lost due to their personal computer or other communication equipment being out of operation. Messages transmitted by way of e-mail or Internet mail often have a size of a few kbits, different from the return messages of 64 bits being  
30 exchanged, e.g., in the Inmarsat-D satellite communication.

In accordance with a further embodiment of the invention, messages received from a group of users such as, e.g., lorries of one and the same firm or manager of a fleet of lorries, may be stored in a common mailbox. Within a  
35 common mailbox, it is then possible once again to distribute the messages in question among separate mailboxes associated with specific users, e.g., on the basis of a received identification code and/or address code or part thereof.

Since users are generally associated with different telecommunication operators, and not every operator disposes of his own earth station, and each earth station in most cases has a direct communication link with only one or two satellites, in practice, in a service centre, return messages will be received intended for users associated with different telecommunication operators. That is to say, different operators in the same country or operators in different countries. By the way, this is also valid for the transmission of messages.

In a still further embodiment of the invention, a transparent and flexible exchange of telecommunication traffic between various telecommunication operators and users is provided in such away that in a common mailbox, messages are stored from users associated with one telecommunication operator. Subsequently, the telecommunication operators may themselves determine the way in which they will further transmit the messages stored in their mailbox.

Due to the use of mailboxes, both for the individual users and jointly for a group of users or a telecommunication operator, tariffing of the costs involved in the transmission of the messages may simply be coupled to the owner, or lessee of a mailbox in question, as the case may be. After all, there is an obvious "owner" of a message, namely the owner (contracting party) of the mailbox in question.

A simple way of tariffing is, e.g., the invoicing of a predetermined amount for each message delivered to a mailbox. In addition, a choice may be offered which message may be made available at what cost etc. Messages which are incapable of being stored in a mailbox (not even of a specific operator) are not capable of being addressed and may be "thrown away", so that no expenses need be incurred for storage or transmission of messages to, e.g., other operators.

Within the Inmarsat-D telecommunications system, address codes are available having a length of only 7 or 8 bits for addressing the destination of a return message. The length depends on the type of return message. It will be

understood by those skilled in the art that in such short address codes no complete network address, including network types (PSTN, GSM, Datanet etc.) can be included. A direct translation, too, by way of a translation or lookup  
5 table, is limited to only 128 or 256 (7 or 8 bits, respectively) destination codes. For a world-spanning service, said number must be deemed too small.

In a preferred embodiment of the invention, therefore, a mailbox is selected on the basis of an address code, which  
10 is included in a message received, and an identification code associated with the user in question, a lookup table being available for an identification code and the address code referring to references included in the lookup table.

Within the system, the identification code of a user is  
15 unique, while the address codes for different users may be the same. Although the address codes used in practice have a limited size of 7 or 8 bits only, for each return message a large number of mailboxes are capable of being addressed in this manner.

20 In a still further embodiment of the invention, the lookup table comprises at least a first and a second address block, the one address block referring to a user-specific mailbox and the other address block referring to a mailbox common to a group of users, a mailbox in question  
25 being selected from the first or second address block on the basis of the address code received. That is to say, on the basis of an address code from, e.g., the first address block, the message in question will be delivered to the mailbox of an individual user and on the basis of a address  
30 code from, e.g., the second address block, the message in question will be stored in the common mailbox addressed by said address code. In this connection, the option is left open that address codes from the first and second address blocks may refer to the same mailboxes.

35 By using such common mailboxes for telecommunication operators, a high degree of privacy, is realised since the service centre need not be aware of the organisation and setup of the traffic of messages of an operator in question.

In the event of, e.g., a common mailbox per telecommunication operator, it may suffice to directly deliver the message into the common mailbox addressed by the second address block. Subsequently, the operator may also have a lookup table available for his mailbox, a message in question being capable of being stored in a user-specific mailbox on the basis of the identification code and/or address code.

Apart from a reference to a mailbox, the lookup table in a further embodiment of the invention comprises a third address block, in which references are included which relate to a group of most recently transmitted messages, such as messages transmitted from a fixed user (a manager of a fleet of lorries) to a mobile user (a lorry). To the messages, there may be assigned a sequence number, and a message in question may then be selected, e.g., on the basis of the address code.

A return message having an address code from the third address block is delivered into the mailbox of the sender who was recorded under the address code referred to in the third address block. As a result, the mobile station has an option to indicate that the return message is a reply to a message transmitted to a user in the satellite communication network. The return message is then stored in the addressed mailbox with a reference, e.g., the sequence number, to the transmitted message in question.

In order to make several services available to a user, in a further embodiment of the invention the lookup table is provided with a fourth address block, in which there are included references relating to services to be provided to a user. A service in question is then selected from the fourth address block on the basis of an address code, it being possible to think of, e.g., services such as providing an electronic mailbox for the messages to a mobile user, automatically retransmitting the most recently transmitted messages, retransmission at the request of a mobile user etc.

Other services which are possible using the storage in electronic mailboxes according to the invention comprise, inter alia, the immediate forwarding of a message to a



network destination, the collection of messages and scheduled forwarding thereof, simply modifying the network destination by the owner of the mailbox, i.e., the network by way of which the messages must be delivered to the owner, modifying the number of messages to be collected etc.

Without mailbox, such provisions would have to be administrated, e.g., directly in a translation or lookup table at all registries relating to a destination address in question, which is awkward, to say the least, and comprises a potential source of errors. Using the invention, a destination need be administered only once, i.e., coupled to the mailbox.

In one embodiment of the invention, the lookup table comprises 128 sequentially numbered references, the first address block referring to the references numbered 0-31, the second address block referring to the references numbered 32-63, the third address block comprising the references 64-95 and the fourth and last address block the references 96-127 of the lookup table.

In order to prevent messages stored in a mailbox being capable of being read by unauthorised persons, in a further embodiment of the invention the messages are made available to authorised users only, i.e., upon request or automatically, with in the latter case clusters of messages being delivered to a user in the earth communication network. Such user may of course also be an operator, the messages being delivered, e.g., into an electronic mailbox of the operator in question. After a message has been transmitted, it may be erased from the mailbox.

The invention also relates to a device for exchanging, in a telecommunications system, telecommunication traffic between users, which telecommunications system comprises a satellite communication network such as the Inmarsat system, built up from a number of telecommunication satellites which are operatively coupled, by way of radio transmission links, to one or more earth stations, which earth stations are operatively connected, by way of a service centre, to an earth communication network, built up from fixed and/or mobile telecommunication networks,

characterised by control means for storing, in electronic mailboxes, messages received from users in the service centre by way of the satellite communication network.

In accordance with a further embodiment of the device  
5 according to the invention, the control means are arranged for storing, in a common mailbox, the messages received from a group of users, e.g., a mailbox for the users of one and the same operator. It should be noted that a common mailbox, if so desired, may be located remotely from the  
10 service centre, e.g., in a management centre of an operator, the control means being capable of exchanging messages with the management centre by way of a suitable transmission link.

In accordance with further embodiments of the invention,  
15 the control means are arranged for selecting a message from a group of messages most recently transmitted to a (mobile) user, or for providing the user in question with special services, as the case may be.

By way of the control means, the messages stored in a  
20 mailbox may be transmitted at will to an authorised user or automatically, as the case may be, in, e.g., clusters of messages received. In addition, the control means may be arranged for tariffing services rendered to a user of a mailbox.

25 The invention additionally relates to a telecommunication unit, comprising user interface means and transmission means for exchanging telecommunication traffic between users in a telecommunications system, comprising a satellite communication network, such as the Inmarsat  
30 system, built up from a number of telecommunication satellites which are operatively coupled, by way of radio transmission links, to one or more earth stations, which earth stations are operatively connected, by way of a service centre, to an earth communication network built up  
35 from fixed and/or mobile telecommunication networks, a message transmitted by the telecommunication means comprising an address code, characterised in that the transmission device is arranged for transmitting an address code selected from a first or second address block  
40 comprising address codes which refer to a user-specific

electronic mailbox or a common electronic mailbox for storing therein a message transmitted by the transmission device.

In a further embodiment, the transmission device of the  
5 telecommunication unit is arranged for transmitting an address code selected from a third address block, comprising references relating to a group of most recently transmitted messages, or a fourth address block, comprising references which relate to services to be provided to a  
10 user.

The invention is described in more detail below on the basis of the enclosed drawings.

FIG. 1 schematically shows a telecommunications system comprising a satellite communication network and an earth  
15 communication network.

FIG. 2 shows, in the form of a block diagram, a first embodiment of the invention, messages received from the satellite communication network being stored in electronic mailboxes.

20 FIG. 3 shows, in the form of a block diagram, a second embodiment of the invention, in which messages received from the satellite communication network are stored in common electronic mailboxes.

FIG. 4 schematically shows a typical layout of a message  
25 received by way of the satellite communication network.

FIG. 5 schematically shows the layout of a lookup table according to a preferred embodiment of the invention.

The invention is illustrated below without detailed technical descriptions of the earth communication network  
30 or the fixed and mobile telecommunication networks thereof, as the case may be, and the satellite communication network. Only the elements required for a good understanding of the invention by those skilled in the art are explained in greater detail. For detailed information  
35 on said communication systems, reference is made to telecommunication manuals and textbooks which are readily available in practice.

FIG. 1 shows a telecommunications system which in its entirety is designated by reference numeral 1, consisting

of a satellite communication network 2 and an earth communication network 3.

The satellite communication network 2 comprises a number of communication satellites 4 such as, e.g., the satellites 5 of the Inmarsat system, which communicate, by way of a radio link 6, with earth stations 5. The earth stations 5 are connected to a service centre 7. The combination of an earth station and a service centre is sometimes also designated by the term "Land Earth Station (LES)". To a service centre 7, there may be connected several earth stations 5. The communication satellites 4 may additionally be positioned in such a manner that an earth station 5 disposes of a direct radio communication link 6 with several communication satellites 4.

The service centre 7 is connected, by way of a gateway or "International Switching Centre (ISC)" 8, to the individual telecommunication networks of the earth communication network 3. The earth communication network generally comprises one or more "Public Switched Telephone Networks (PSTN)", Packet-Switched (PS) data networks 10 according to, e.g., the X.25 protocol, and, e.g., a data communication network exchanging traffic of messages in accordance with the Internet Protocol (TCP/IP) 11. Apart from the said, generally fixed, wire-bound telecommunication networks 9, 10, 11, the earth communication network 3 may also comprise one or more Public Switched Land Mobile (PSLM) networks. Said mobile networks may be, e.g., of the cellular type, according to Global System for Mobile (GSM) communications, such as GSM 900, GSM 1800, GSM 1900.

By way of the satellite communication network 2, users 13, 14, 15, who are located anywhere on earth within the coverage area of the satellite communication network 2, by way of a radio link 16 with a communication satellite 4, may exchange messages with users 17, 18, 19 who are connected to any of the telecommunication networks of the earth communication network 3. For the benefit of the invention, the users 17, 18, 19 are schematically represented by so-called Personal Computers (PCs).

The Inmarsat-D communication system has a setup as described above and shown in FIG. 1, data messages being capable of being transmitted by the users 17, 18, 19 of the earth communication network 3 to the (mobile) users 13, 14, 15, and the users 13, 14, 15 being capable of returning short return messages. Within the Inmarsat-D system there may be transmitted, to a user 13, 14, 15 in question, messages having a maximum information size of 250 bytes, while the users 13, 14, 15 may transmit return messages having a length of 8 bytes. The bit rate towards the users 13, 14, 15 amounts to 20 bits/s according to the Slotted Aloha protocol.

A typical application of the Inmarsat-D system is the one in which a manager of a fleet of lorries such as, e.g., user 17, may transmit messages to a driver of any of his lorries such as, e.g., user 14, the user 14 in question returning a short return message, e.g., as a confirmation of receipt. If equipped with a suitable receiver, the return message may also contain, e.g., positional information originating from signals from satellites 20 of the so-called Global Positioning System (GPS). The GPS per se is known in practice and requires no further explanation here. It is of course also possible to return messages (not shown) on the state of the load originating from sensors mounted in the lorry of the user 14.

In view of the relatively small size of the return messages, i.e., 64 bits in an embodiment of the Inmarsat-D system, the transmission time for transmitting to a user 17, 18, 19 such messages in a conventionally switched telephone network 9 in the event of a data transmission rate of, e.g., 64 kbits/s, amounts to only a few milliseconds. In such an event, the time for setting up a switched connection, however, amounts to a multiple of said message duration which, in terms of traffic, is an unfavourable, less efficient ratio.

FIG. 2 schematically shows a first embodiment of the solution according to the invention, the return messages received by way of the earth stations 5 being stored in electronic mailboxes 21 under the control of control means 22 which are coupled in, or directly to, the service centre

7. An electronic mailbox 21 in practice is formed by a submemory of a larger memory space of a data-storage system. The mailboxes 21 may vary in memory size, depending on the needs of a user in question. Of course, a cost structure as a function of the available memory space may be used.

Apart from electronic mailboxes 21 for individual users, the invention provides for a second embodiment, messages received from various users being stored, by way of an earth station 5, in a common electronic mailbox 24, 25, 26, as schematically shown in FIG. 3.

In this embodiment, there are shown common electronic mailboxes 24, 25, 26, in which messages are stored by way of control means 23. As illustrated on the basis of the common mailbox 26, these in their turn may be subdivided into separate, individual mailboxes 21.

The use of common mailboxes is of advantage, e.g., for a manager of a fleet of lorries, who wants to receive the messages from all of his lorries in one and the same mailbox.

In practice, the users 13, 14, 15 may be subscribers or users of telecommunication facilities of various telecommunication operators in the same country or in different countries. By assigning, to each telecommunication operator, an own common mailbox 24, 25, 26, the messages received, by way of the earth stations 5, from subscribers or users associated with an operator in question, may be stored in the common electronic mailbox 24, 25, 26 of the operator in question.

The contents of a common mailbox of an operator may subsequently be transmitted, by way of a transmission link suitable for this purpose, e.g., using a data communication facility, such as a packet-switched data network 10, to the management centre (not shown) of the operator in question, in which the information may be once again stored in electronic mailboxes 27, 28, which are common for a number of users from a group of users and/or in mailboxes 21 of individual users or the subscribers of the operator in question, as the case may be.

It will be understood that the users associated with a specific telecommunication operator, as described above, may be capable, by way of one or more of the earth communication networks 9, 10, 11 or 12, of collecting  
5 information from, e.g., their individual mailbox 21.

Apart from the advantage of saving expensive telecommunication facilities, particularly in switched telecommunication networks, the use of electronic mailboxes according to the invention offers the advantage that all  
10 costs involved in the traffic of messages may be directly allotted to the owner or lessee of an individual mailbox 21, or a common mailbox 24, 25, 26, as the case may be. Messages which cannot be stored in a mailbox in question, cannot be addressed in the system and may be omitted.

15 FIG. 4 schematically shows the setup of a return message 30 received in the Inmarsat-D communication system from a user 13, 14, 15.

Each user 13, 14, 15 has an own identification code ID 31 having a size of 20 bits. For addressing a destination at  
20 which the message 30 in question must be delivered, there is available an address code 32 consisting of 7 bits. With this address code, therefore, there may be defined 128 different addresses. The remaining bits mainly comprise information and control data 33.

25 For delivering, in accordance with the invention, a message 30 at an address indicated by the address code 32 thereof, there is available an own lookup table for each unique identification code 31 in the control means 22. Said lookup table contains references which refer to a  
30 mailbox 21 in question, into which the message in question must be delivered. Per identification code 31, and therefore per user, there may thus be addressed a maximum of 128 different mailboxes 21 in the Inmarsat-D system. Instead of individual mailboxes 21, of course there may  
35 also be addressed common mailboxes 22, 23, 24 having an address code in question.

FIG. 5 shows a practical embodiment of a lookup table 35 according to the invention.

In this connection, the address code 32 is broken down into four address blocks, 36, 37, 38 and 39 respectively, each of which contains 32 references.

As shown, the first address block 36 refers to the first 32 references, numbered 0-31; the second address block 37 refers to the subsequent 32 references, numbered 32-63; the third address block 38 relates to references following the second address block, numbered 64-95; and the fourth address block 39 refers to the references 96-127.

10 The references corresponding to the first address block 36 of the lookup table 35 refer to individual mailboxes 21; the references corresponding to the second address block from the lookup table 35 refer to common mailboxes 24, 25, 26, while the third address block 38 corresponds to 15 references which identify a specific message from the most recently transmitted messages; and the fourth address block comprises references to a specific service such as, e.g., repeating several of the most recently transmitted messages etc.

20 Upon receipt of a message 30 from a user, a lookup table 35 in question is consulted, by the control means 23 on the basis of the identification code 31 received, a lookup table 35 in question. Using the address code 32 received, it is then analysed in which individual and/or common 25 mailbox the message must be stored, using the first and second address blocks 36, 37, respectively, whether messages must be selected, in accordance with the third address block 38, and whether special services are requested, such as repeating messages indicated by the 30 fourth address block 39.

Whenever maximum privacy is desired, the second address block 37 according to the invention may also be arranged in such a manner that it unequivocally refers to a number of common mailboxes 24, 25, 26 which, e.g., are assigned to 35 telecommunication operators. When in such a case, a message 30 is received, the control means 23 will only need to analyse the second address block to deposit the message in question in the correct common mailbox. The identification code 31 then needs not be investigated. 40 Within the common mailbox in question, such as the mailbox



24 or the mailboxes 26, 27 located at a telecommunication operator, there may then once again subsequently be available a lookup table 35 in which an eventual individual mailbox 21 is selected on the basis of the identification  
5 code 31.

For subsequently collecting messages from a mailbox in question, it is possible to adhered to authorisation and identification methods known per se, such as the application of personal identification numbers, which does  
10 not require any further explanation for those skilled in the art.

A telecommunication unit suitable for applying the invention, with which a user 13, 14, 15 is equipped, comprises transmission means 34 which, apart from  
15 exchanging telecommunication traffic with the satellite communication network 2, are also arranged for transmitting an address code for selecting an individual electronic mailbox 21 in question and/or a common electronic mailbox 24, 25, 26 (see FIG. 1). In the preferred embodiment of  
20 the invention, the transmission means 34 contain address codes from the first address block 36 or the second address block 37, respectively. The address codes in question may be programmed into a telecommunication unit in a fixed manner, or be transmitted as a function of an application  
25 in question.

When, e.g., a manager of a fleet of lorries requests information on the route, said information may be stored in a first mailbox, while information on the state of the load is deposited in a second, third or further mailbox.

30 When the option is offered of repeating messages for a user 13, 14, 15 in question and/or render special services, the transmission means 34 of the telecommunication unit according to the invention are also further arranged for selecting the address codes from the third address block 38  
35 or the fourth address block 39, respectively.

Although in the above the invention is described on the basis of the Inmarsat-D system, it will be understood that the application of the invention is not limited to this specific system. In addition, fixed users, too, may  
40 exchange messages by way of the satellite communication

network 2 with users of the earth communication network 3.

CLAIMS

1. Method for exchanging telecommunication traffic between users in a telecommunications system, comprising a  
5 satellite communication network, such as the Inmarsat system, built up from several telecommunication satellites which are operatively coupled, by way of radio transmission links, to one or more earth stations, which earth stations are operatively connected, by way of a service centre, to  
10 an earth communication network built up from fixed and/or mobile telecommunication networks, characterised in that messages received in the service centre from users by way of the satellite communication network are stored in electronic mailboxes.  
15
2. Method according to claim 1, characterised in that messages received from a group of users are stored in a common mailbox.
- 20 3. Method according to claim 2, characterised in that messages from users associated with a telecommunication operator are stored, in a common mailbox.
4. Method according to claim 3, characterised in  
25 that, in a common mailbox, messages are stored distributed over separate mailboxes.
5. Method according to one or more of the preceding claims, characterised in that a mailbox is selected on the  
30 basis of an address code included in a message received and an identification code associated with the user in question, a lookup table for an identification code being available and the address code referring to a reference included in the lookup table.  
35
6. Method according to claim 5, characterised in that the lookup table comprises at least a first and a second address block, the one address block referring to a user-specific mailbox and the other address block referring  
40 to a mailbox common to a group of users, a mailbox in

question being selected from the first or second address block on the basis of the address code received.

7. Method according to claim 6, characterised in that the lookup table comprises a third address block in which references are included relating to a group of most recently transmitted messages.

8. Method according to claim 7, characterised in that the lookup table comprises a fourth address block in which references are included relating to services to be rendered to a user, a service in question being selected on the basis of the address code received.

9. Method according to claim 8, characterised in that the lookup table comprises 128 consecutively numbered references, the first address block referring to the first 32 references having the lowest sequence numbers, the second address block referring to the next 32 references, the third address block referring to the still following 32 references, and the fourth address block referring to the 32 references having the highest sequence numbers.

10. Method according to one or more of the preceding claims, characterised in that the messages stored in a mailbox may be transmitted to an authorised user on demand.

11. Method according to one or more of the claims 1 to 9 inclusive, characterised in that the messages stored in a mailbox are transmitted automatically to an authorised user, in clusters of messages, if so required.

12. Method according to one or more of the preceding claims, characterised by a user's account associated with an electronic mailbox, for crediting thereto the costs involved in receiving, storing and transmitting messages.

13. Device for exchanging, in a telecommunications system, telecommunication traffic between users, which telecommunications system comprises a satellite

communication network, such as the Inmarsat system, built up from several telecommunication satellites which are operatively coupled, by way of radio transmission links, to one or more earth stations, which earth stations are operatively connected, by way of a service centre, to an earth communication network built up from fixed and/or mobile telecommunication networks, characterised by control means for storing in electronic mailboxes, messages received in the service centre from users by way of the satellite communication network.

14. Device according to claim 13, characterised in that the control means are arranged for storing, in a common mailbox, messages received from a group of users.

15. Device according to claim 13 or 14, characterised in that the control means are arranged for selecting a mailbox on the basis of an address code included in a message received and an identification code associated with a user in question, the control means comprising an identification-code-related lookup table provided with references to mailboxes for selecting a reference or mailbox, as the case may be, on the basis of an address code and identification code received.

16. Device according to claim 15, characterised in that the lookup table comprises at least a first and a second address block, the one address block referring to a user-specific mailbox and the other address block referring to a mailbox common to a group of users, the control means being arranged for selecting, from the first or second address block on the basis of an address code received, an individual or common mailbox in question for storing a message received therein.

17. Device according to claim 16, characterised in that the lookup table comprises a third address block, in which references are included which relate to a group of most recently transmitted messages, the control means being

arranged for selecting a message on the basis of an address code received.

18. Device according to claim 17, characterised in  
5 that the lookup table comprises a fourth address block, in which references are included which relate to services to be rendered to a user, the addressing means being arranged for selecting a service in question on the basis of an address code received.

10 19. Device according to one or more of the claims 13 to 18 inclusive, characterised in that the control means are arranged for, if so requested, transmitting to an authorised user messages stored in a mailbox.

15 20. Device according to one or more of the claims 13 to 18 inclusive, characterised in that the control means are arranged for automatically transmitting, to an authorised user, messages stored in a mailbox.

20 21. Device according to claim 19 or 20, characterised in that the control means are arranged for erasing stored messages after the transmission thereof from the mailbox.

25 22. Device according to one or more of the claims 13 to 21 inclusive, characterised in that the mailboxes and the control means are mounted in the service centre.

30 23. Device according to one or more of the claims 13 to 22 inclusive, characterised in that the control means are arranged for storing, by way of a transmission link, messages received in remotely located mailboxes.

35 24. Device according to one or more of the claims 13 to 23 inclusive, characterised in that the control means are arranged for tariffing services rendered to a user.

25. Telecommunication unit, comprising user interface means and transmission means for exchanging  
40 telecommunication traffic between users in a

telecommunications system, comprising a satellite communication network, such as the Innarsat system, built up from several telecommunication satellites which are operatively coupled, by way of radio transmission links, to one or more earth stations, which earth stations are operatively connected, by way of a service centre, to an earth communication network built up from fixed and/or mobile telecommunication networks, a message transmitted by the telecommunication means comprising an address code, characterised in that the transmission device is arranged for transmitting an address code selected from a first or second address block, comprising address codes which refer to a user-specific electronic mailbox or a common electronic mailbox for storing therein a message transmitted by the transmission device.

26. Telecommunication unit according to claim 25, characterised in that the transmission device is arranged for transmitting an address code selected from a third address block, comprising references relating to a group of most recently transmitted messages, or a fourth address block, comprising references relating to services to be rendered to a user.

1/3

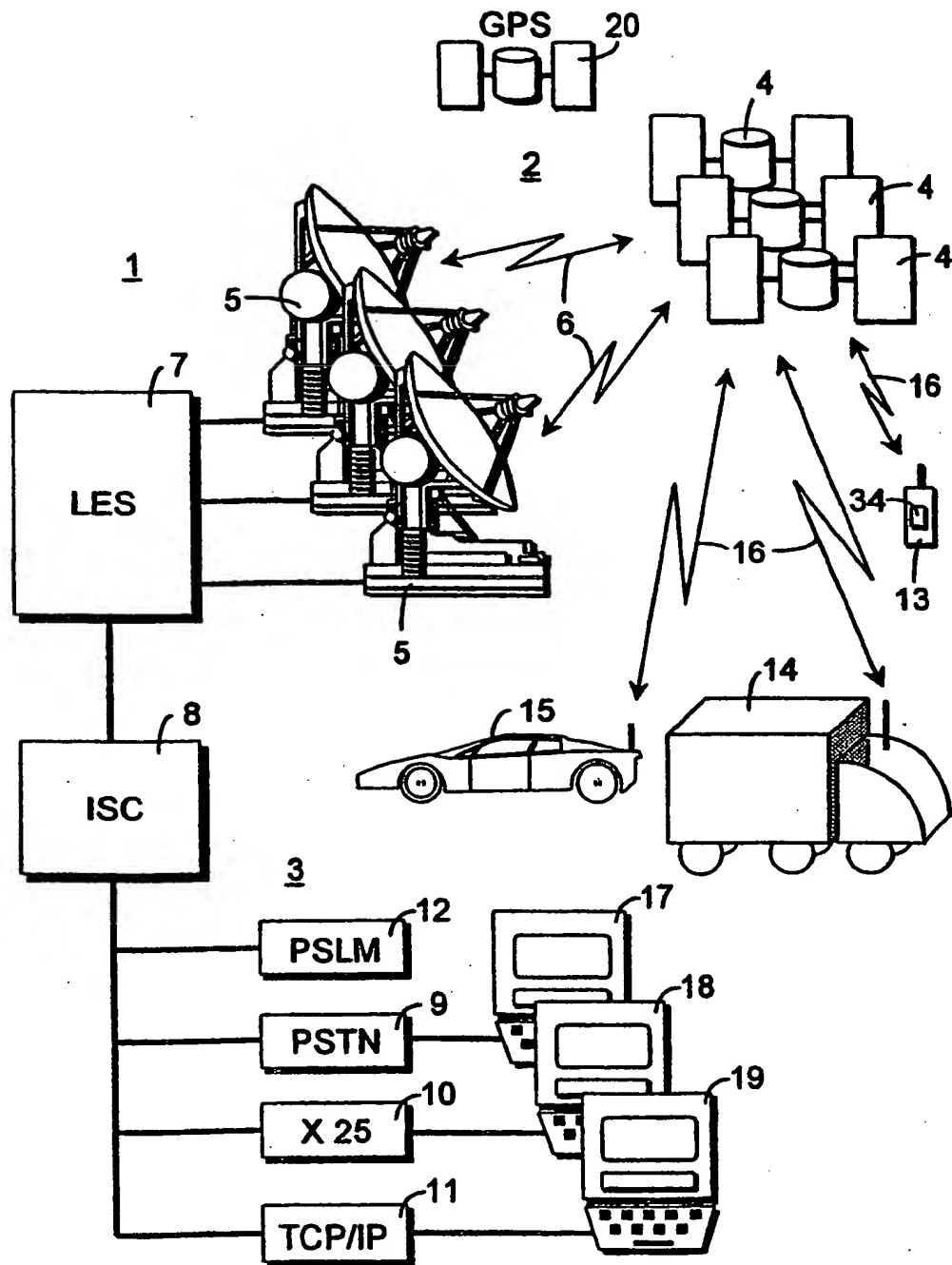


Fig. 1



2/3

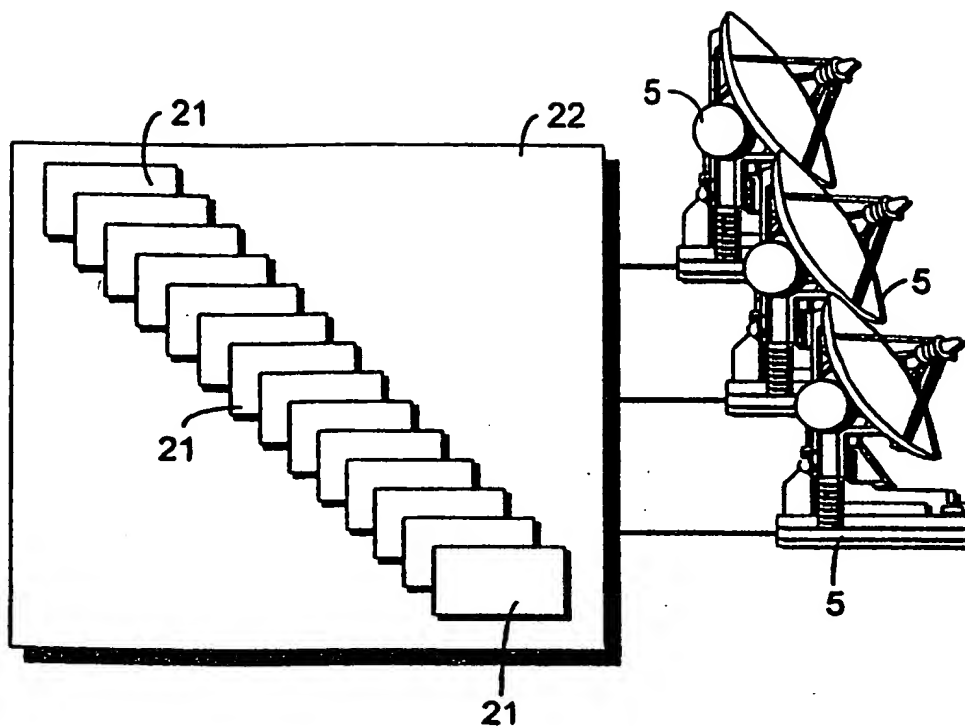


Fig. 2

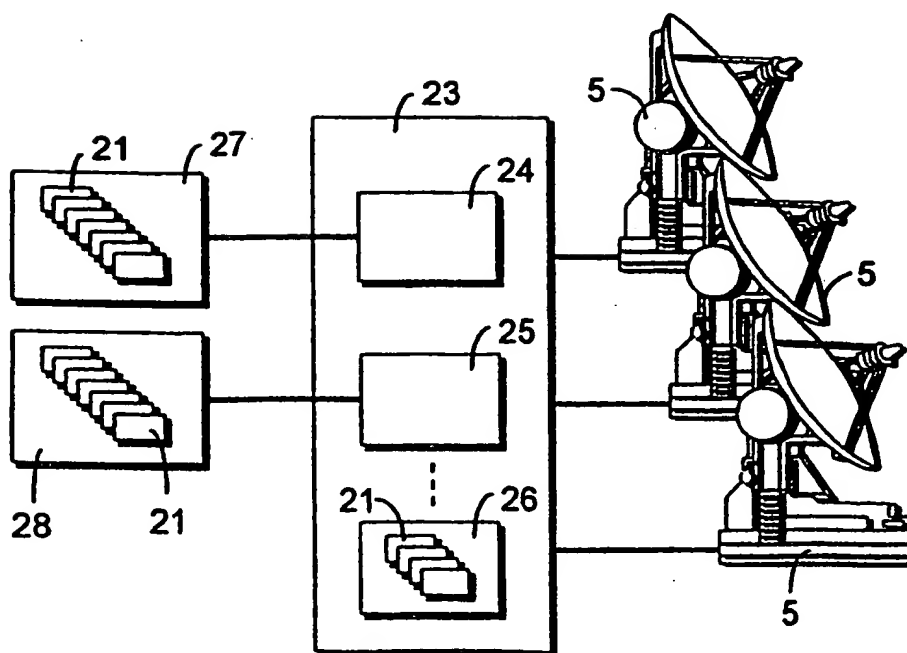


Fig. 3

3/3

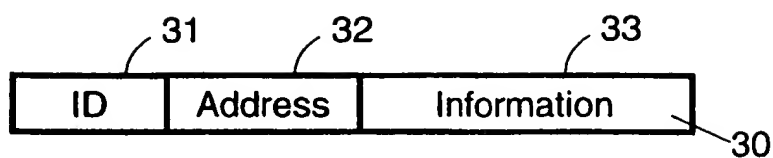


FIG. 4

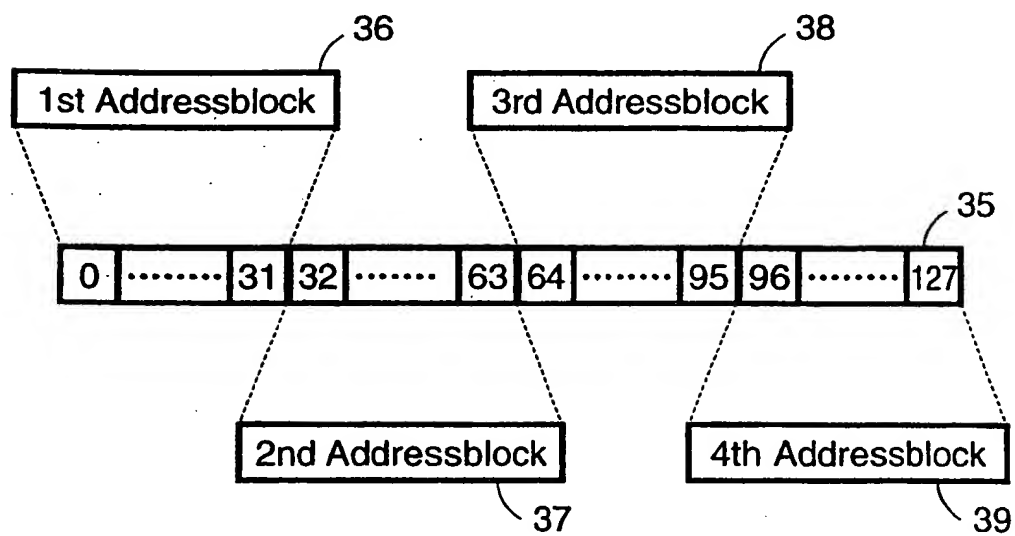


FIG. 5

# INTERNATIONAL SEARCH REPORT

International Application No.

PCT/EP 99/09045

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H04B7/185

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97 21281 A (AMSC) 12 June 1997 (1997-06-12) claims 1-23	1-26
X	EP 0 849 925 A (ICO) 24 June 1998 (1998-06-24) claims 1-7	1-26
X	US 5 815 506 A (COMSAT) 29 September 1998 (1998-09-29) column 2, line 58 -column 3, line 11; claims 1-20	1-26
X	US 5 394 560 A (KANE) 28 February 1995 (1995-02-28) column 1, line 50 -column 2, line 10	1-26
	-/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

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"&" document member of the same patent family

Date of the actual completion of the international search

1 February 2000

Date of mailing of the international search report

15/02/2000

Name and mailing address of the ISA

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# INTERNATIONAL SEARCH REPORT

Inter national Application No

PCT/EP 39045

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>CHENG B ET AL: "A NEW TYPE OPTIMIZED LEO SATELLITE GLOBAL EMAIL COMMUNICATION NETWORK"</p> <p>IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, PHOENIX, ARIZONA, NOV. 3 - 8, 1997, vol. 2, 3 November 1997 (1997-11-03), pages 1133-1137, XP000737707</p> <p>INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS ISBN: 0-7803-4199-6</p> <p>page 1133, left-hand column, line 1</p> <p>-right-hand column, line 2</p> <p>-----</p>	1-26

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 99/09045

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US 5394560 A	28-02-1995	NONE	